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ABSTRACT

This proposed plan for postsecondary education in New Hampshire contains eight sections. After the introduction concerning the function of a state system, the economic impact of colleges, and some former studies of postsecondary education, New Hampshire postsecondary education is discussed in detail. Colleges, students, statements by college presidents, major programs, commuting possibilibies, proprietary education, graduates, teacher supply, health manpower shortages, and continuing education are included. Future enrollment and physical facilities are considered in the following two sections. Then finances, including tuition increases, financial aid, and state aid to private colleges, along with administration and coordination or the public private and regional sector are then discussed. Recommendations constitute the seventh section. Appendices include: letters to college presidents, teacher production and population projections in New Hampshire, a bibliography, and memberships of succeeded agencies. Statistical tables accompany the text. (PG)

ED 094646

A PLAN

for

POSTSECONDARY EDUCATION

in

NEW HAMPSHIRE

Prepared by
Everett B. Sackett
of Sackett and Associates
Lee, New Hampshire

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For the

Postsecondary Education Commission

Successor to the Coordinating Board
of Advanced Education and Accreditation

66 South Street, Concord, New Hampshire

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HE 005 765

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This Commission as of July 1, 1973 succeeded both the Coordinating Board of Advanced Education and Accreditation and the Higher Education Facilities Commission. For the membership of those two boards, see Appendix E.

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DOVER, NEW HAMPSHIRE 03820

LETTER OF TRANSMITTAL

August 31, 1973

Postsecondary Education Commission
66 South Street
Concord, New Hampshire 03301

Ladies and Gentlemen:

I am pleased to transmit herewith a proposed plan for postsecondary education in New Hampshire. This report was prepared under a contract with the Coordinating Board of Advanced Education and Accreditation which was a subcontract under an agreement between the Coordinating Board and the Higher Education Facilities Commission. Both agencies have been succeeded by the Postsecondary Education Commission, to which this report consequently is submitted.

Thanks are due the college officials who supplied the data for the statistical studies, largely based on the federal Higher Education General Information Survey (HEGIS) annual reports augmented by a few supplemental inquiries. The college presidents and directors have been additionally helpful by participating in a conference to discuss the planning of the project and another to react to the tentative recommendations. In addition, many of them supplied descriptive material concerning their institutions.

President Jere Chase, Henry Munroe, and Lynn Johnson of the New Hampshire College and University Council gave valuable counsel and helped arrange the conferences with the presidents. Arthur E. Jensen, executive secretary of the Coordinating Board, was consulted frequently and gave valuable comments on the draft of the report. Mrs. H. Irene Peters, Consultant on Health Occupations Education of the State Department of Education, and member of the Health Careers Council, and Mrs. Elizabeth Natti, Executive Director of the Health Careers Council, have assisted with the section on the education of health personnel.

Frank Van Pattee was a valued associate. Owen B. Durgin and W. Timothy Weaver prepared helpful reports. Mrs. Nancy DeStefano, secretary of the Coordinating Board, supplied excellent tabulating and typing services.

Although many persons have helped in the preparation of this report, and I have been influenced by their comments, the recommendations represent my conclusions and are not a consensus of any group.

Respectfully submitted,

Everett B. Sackett

EBS/nd

TABLE OF CONTENTS

	Page
I. INTRODUCTION	
Function of a State System	1
Economic Impact of Colleges	1
Former Studies of Postsecondary Education	2
II. POSTSECONDARY EDUCATION IN NEW HAMPSHIRE	
The Colleges and the Students	7
Statements of Presidents Regarding Their Colleges	9
Major Programs Offered	11
Commuting Possibilities in New Hampshire	13
Proprietary Postsecondary Education	18
Distribution of Graduates by Disciplines	19
The Shrinking Demand for Teachers	19
The Shortage in Health Manpower	22
Continuing Education	28
III. FUTURE ENROLLMENT	
The Changing Trend	32
Projections for Public Institutions	34
Prospects for Private Institutions	38
Factors Affecting College Attendance	40
IV. PHYSICAL FACILITIES	
Present Space in New Hampshire Colleges	46
Comparison with U. S. Practice	48
Residential Facilities	51
V. FINANCES	
Revenues and Expenditures of New Hampshire Colleges	54
Surpluses and Deficits	55
Tuition Increases	62
Financial Aid to Students	65
State Aid for Private Colleges	67
VI. ADMINISTRATION AND COORDINATION	
The Public Sector	74
The Private Sector	80
Regional Coordination	80
VII. RECOMMENDATIONS	84
APPENDIX A - Letter to College Presidents	93
APPENDIX B - Teacher Production in New Hampshire	94
APPENDIX C - Population Projections and New Hampshire Private College Enrollment	111
APPENDIX D - Bibliography	118
APPENDIX E - Memberships of Succeeded Agencies	121

LIST OF TABLES

Number	Title	Page
1	Residence Status of Full-Time Undergraduates and Unclassified Students in New Hampshire Colleges, Fall, 1972.	8
2	College Presidents' Description of Their Institutions.	10a
3	Percentages of In-State Undergraduate Students Within Commuting Distance of the Colleges Attended, 1972.	15
4	Degrees Granted by New Hampshire Colleges, July 1971 Through June 1972.	20
5	Estimated Growth in New Hampshire Health Manpower, 1968-1975.	23
6	New Hampshire Production of Health Manpower.	24
7	Health Care Education Needs Considered to Be Top Priority by More than 33 Per Cent of Respondents in Delphi Study.	27
8	Head Count of Part-time Students in New Hampshire Colleges, Fall of 1972.	29
9	Comparison of Enrollments in New Hampshire Colleges, Fall of 1971 and 1972.	33
10	Full-Time Equivalent Undergraduate Enrollment Projection, Eight New Hampshire Private Colleges.	39
11	Reasons Parents Gave for Choice of College.	43
12	Space per Student, New Hampshire Colleges, 1973.	47
13	Assignable Square Feet per Full-Time Equivalent Student, U. S. Practice, 1971, for Selected Areas and Classifications of Colleges.	49
14	New Hampshire College Physical Facilities Compared with U. S. Median Practice in Terms of F.T.E. Student Capacity.	50
15	Residential Facilities, New Hampshire Colleges, Fall 1972.	52

LIST OF TABLES
(Continued)

Number	Title	Page
16	College Revenues in New Hampshire, Fiscal 1971-72.	56
17	College Expenditures in New Hampshire, Fiscal 1971-72.	57
18	Trends in Revenues (Converted to 1972 Dollars) Per Full-Time Equivalent Student, in New Hampshire Colleges.	58
19	Trends in Expenditures (Converted to 1972 Dollars) per Full-Time Equivalent Student in New Hampshire Colleges.	59
20	Summary of Available Financial Data for Private New Hampshire Senior Colleges, Fiscal 1972.	61
21	Changes in Tuition and Fees in New Hampshire Colleges (Converted to 1972 Dollars).	63
22	Changes in per Student Operating Costs and Tuition Charges, New Hampshire Colleges, Between Fiscal 1969 and Fiscal 1972.	64
23	Estimated Cost of a Plan to Subsidize Tuition of Students in Private Colleges.	73
24	New Hampshire Participation in Regional Student Exchange Program, 1972-73.	82

LIST OF FIGURES

Number	Title	Page
1	Junior Colleges in New Hampshire and 25-mile Commuting Arcs of Public Institutions.	16
2	Senior Colleges in New Hampshire and 25-mile Commuting Arcs of Public Institutions.	17
3	Comparison of Grade 12 Enrollment With In-State Applications for the University System and With Vocational-Technical Freshmen.	35
4	Freshman In-State Applications to University System, 1965-1973, and 95 per cent Confidence Bond Projection.	37

Chapter I

INTRODUCTION

Function of a State System

The primary function of a state system of postsecondary education is to provide opportunity for the maximal developments of its citizens - adult as well as youth - as workers, citizens, and persons. It also should provide the economy of the state with an adequate supply of workers with the requisite degrees of skill, and the political and social organizations with competent leadership. The colleges also serve as cultural centers for their regions and as congeries of highly trained professionals.

The state of New Hampshire assumes responsibility for these functions by maintenance of public institutions - the University System and the vocational-technical institutions of the State Board of Education. The private colleges also carry part of the burden. The public colleges receive substantial - but compared with the other states not generous - support from public funds. The private colleges in New Hampshire receive no direct financial aid from the state, in contrast with the situation in some states.

New Hampshire is not an island unto itself educationally. More than half of those attending college in the state are from out of state and nearly two-fifths of the resident undergraduates attend college outside the state. Many of the native college graduates go elsewhere to work, and in many professional fields New Hampshire is entirely dependent on other states for trained personnel.

Economic Impact of Colleges

Although colleges cost a large amount of money, they are an important economic resource for the state. A recent study by Frank Van Pattee shows that higher education is the seventh largest industry in the state.* The yearly cash expenditures due to higher education in

*Frank Van Pattee, The Impact of Higher Education on the Economy of New Hampshire, Durham, N. H., Center for Industrial and Institutional Development, University of New Hampshire, 1973.

New Hampshire amount to $166,600,000, of which $132,600,000 is spent in the state. Of this outlay, 52 per cent comes from out of state. Given estimated re-spending patterns, the total impact on the economy is $259,000,000. The total New Hampshire impact of the University System is $110,000,000, seven times the amount of state support.

An illustration of the economic impact of a private college on its region is that of New England College in Henniker.* Institutional and community income due to the college was $6,682,608, of which $5,271,56 was from out of state. Expenditures were $7,410,277 (including $1,033,559 in the capital account not reflected in the income figures) of which $5,623,016 was spent in New Hampshire. Estimated re-spending put the tota economic impact at over $10,000,000. Quite aside from their primary educational function, operation of the colleges is important to the state's economy.

Former Studies of Postsecondary Education

If there are differences of opinion as to the optimum pattern for postsecondary education in New Hampshire, they are not due to lack of studies during the past decade of the problem. Three studies have been specifically ordered by the legislature: The Interim Commission on Education (Laws of 1961, ch. 261);# The New Hampshire Junior College Commission (Laws of 1965, ch. 277);** and the Commission to Study and Report on the Goals, Purposes, Organization, and Financing of the State University System and Other Aspects of Higher Education (Laws of 1972, ch. 510).## In addition the Citizens Task Force,*** reporting in 1970, devoted some attention to the organization of higher education. Shortly after formation of the University System, W. Linwood Chase, dean emeritus of the College of Education, Boston University, made a study for the Board of

*Frank Van Pattee, The Impact of New England College on the Economy of New Hampshire, a supplement to The Impact of Higher Education on the Economy of New Hampshire, Durham, 1973.

#Raimond Bowles, Chairman, Report of the Interim Commission on Education, Concord, N. H., 1963.

**Christus Nikitas, Chairman, Comprehensive Junior Colleges, Concord, N. H., 1968.

##James O'Neil, Chairman, Report of the Commission to Study and Report on the Goals, Purposes, Organization, and Financing of the State University System and Other Aspects of Higher Education, Concord, N. H., 1973.

***Royden Sanders, Jr., Chairman, Report of the Citizens Task Force, Concord, N. H., 1970.

Trustees of teacher education in the three institutions.* A study by James W. Morrison on the Growth and Governance of Public Two-Year Colleges in New Hampshire, 1971,# was commissioned by the State Board of Education. The Higher Education Facilities Commission and the Coordinating Board have conducted a number of statistical studies, including About Higher Education in New Hampshire,** and one of broader scope, a "Delphi Seminar."## There are numerous references in the present study to About Higher Education in New Hampshire, which is a companion study to the present one.

The Interim Commission, reporting in 1963, was the broadest study, involving elementary and secondary education as well as higher, and it has had the greatest impact. It recommended upgrading the then teachers colleges at Keene and Plymouth to general college status, each to have its own board of trustees with a State Board of Higher Education having jurisdiction over these two boards and the board of the University of New Hampshire as well. The bill to achieve these ends was amended in the legislature to provide for the present University System, the Keene and Plymouth State Colleges becoming part of the System with all three institutions under an expanded University Board of Trustees. Substituted for the proposed State Board of Higher Education was the Coordinating Board of Advanced Education and Accreditation, which had only advisory and accreditation authority.

All three state institutions were to continue to train both elementary and secondary teachers, with research and post-masters degree work to be concentrated at the Durham campus. All three were to offer associate degree level work for residents of their regions. Also recommended, but not adopted, was an Advisory Council for Education, with a professional staff, to promote improvement of education at all levels. A proposal to establish a state-wide system of comprehensive community colleges and of vocational-technical trade schools contributed to the establishment of the present system of the New Hampshire Technical Institute and the six Vocational-Technical Colleges, under the State Board of Education.

* W. Linwood Chase, Teacher Education in New Hampshire, Durham, N. H., University of New Hampshire, 1965.

\# James W. Morrison, Growth and Governance of Public Two-Year Colleges in New Hampshire, Concord, N. H., State Board of Education, 1971.

\#\#Decision Research, Inc., Final Report, Delphi Panel to Explore Post-Secondary Education in the State of New Hampshire, Dennis W. Binning, Director, Concord, N. H., Coordinating Board, 1972.

**Everett B. Sackett, About Higher Education in New Hampshire, Concord, N. H., Coordinating Board, 1971.

Continuing interest in comprehensive community colleges led to the establishment of the Junior College Commission in 1965. This recommended gradual conversion of the Vocational-Technical Colleges to comprehensive two-year institutions, the first to be in the Merrimack Valley. The change in the nature of these institutions was to be accompanied by transferring their management from the State Board of Education to a new board. Financing was to be jointly by the state, the counties, and the communities, with student tuition bearing half the cost. It also recommended that the University System institutions inaugurate two-year programs in general studies, business, and health vocations. Also proposed was a program of county scholarships for the two-year institutions and a state scholarship program for all post-secondary education. The only immediate realization of these recommendations was the establishment of paramedical programs at the New Hampshire Technical Institute and of some one-year certificate programs at the Vocational-Technical Colleges in Berlin, Claremont, and Portsmouth. The state scholarship program has been authorized (Revised Statutes Annotated, 200-D) but has never been funded.

The Citizens Task Force was concerned with the management aspects of state government, paying only peripheral attention to higher education. It recommended a consistent budget formula for the University System, a separate board for the two-year colleges, and strengthening the Coordinating Board. The Legislature did somewhat broaden the functions of the Coordinating Board.

The Commission to Study and Report on the Goals, Purposes, Organization, and Financing of the State University System and Other Aspects of Higher Education, having been denied a single dollar for its activities, was able to do little more than to meet with groups of educators, accept informational reports from colleges, and identify areas needing further study. It did propose an on-going legislative commission for higher education and better financial reporting by the University System. Differing from all the other study groups it favored less liberal arts and more vocational-technical emphasis in the two-year colleges. It favored loans and grants to students in private colleges but no direct aid to the colleges themselves. For students in public institutions it suggested adjusting tuition charges to ability to pay.

Chase made a number of recommendations for the strengthening and coordination of teacher education at the three state institutions. Some of these concerned the internal workings of the programs, and some are outdated by changing conditions. Transforming the Department of

Education at the University into a four-year college of education was proposed. He would have closed out the home economics teacher preparation program at Keene, concentrating this activity at Durham. He recommended close coordination of extension and summer programs on the three campuses. A joint graduate study committee was advocated along with a proposal that all graduate work in educational administration, supervision, and guidance be concentrated at the Durham campus.

Morrison recommended expansion of the vocations for which the two-year colleges prepare, and again favored their adding programs of general education. Instead of advising a separate board for their governance, he proposed the setting up of a separate division within the State Department of Education, which was done. His recommendation that they be freed from line-item budgets has not been adopted. He recommended some cooperative education programs and more emphasis on short courses and continuing education. He advocated improved guidance and also closer coordination between the two-year colleges, the University System, and the private colleges.

The Delphi Seminar to sample public opinion about the goals and trends in postsecondary education in New Hampshire was conducted in 1972 by Decision Research, Inc. The panel consisted of 113 individuals, of whom 80 had a direct connection with educational institutions or boards and 33 had no such affiliation. The statements to which the panel responded were developed from open-ended items submitted to the panel in the first questionnaire. The items were divided into two categories: those related to Goals and Priorities, and those related to expected Trends.

The highest consensus on goals was for better financing and the related item of better public understanding of postsecondary education. There was no optimism that the trend was in this direction. Expansion and improvement of career oriented programs was rated high as a goal and also as a trend. Better guidance of students received strong support as a goal but was not recognized as a trend. Inclusion of more general education in vocational programs received little support as a goal but was foreseen by many as a trend. Improvement of instruction received considerable support as a goal but slight recognition as a trend.

Expansion of the University System had little support as a goal but was seen as a trend. The same was true for the development of a system of public community colleges. More cooperation between colleges, public and private, rated well as a goal but was seen low as a trend.

The members of the Delphi panel were divided into five groups: college presidents and trustees, deans and faculty members, students, general population, and government (legislators, state officials, members of educational boards). The nature of the procedure was such that statistical comparison of the differences in response between the groups would not be fruitful. It was evident, however, that the students were the most definite in their opinions as regards both goals and trends. The presidents and trustees were at the other extreme. The other three groups were in middle ground on goals and trends, except that the deans and faculty were somewhat more definite regarding trends.

In addition to these studies, the University System has an active office of Research and Planning in addition to numerous faculty committees; the Division of Post-secondary Education of the State Department of Education has a planning and development officer; the New Hampshire College and University Council promotes interinstitutional planning and programs.

Hopefully the present project, drawing on the work of these other agencies as well as conducting studies of its own, will be able to chart a course for postsecondary education in New Hampshire for the next decade that will receive reasonably general acceptance. No plan for education remains long valid. Adjusting this effort to developing conditions will be the task of the Postsecondary Education Commission and its subsidiary advisory committees.

Chapter II

POSTSECONDARY EDUCATION IN NEW HAMPSHIRE

The Colleges and the Students

Higher education was provided in New Hampshire in 1972-73 by twenty-nine degree granting institutions: two universities, fourteen senior colleges, and thirteen junior colleges. Three of these, one university and two senior colleges, are public state institutions. Dartmouth, although named Dartmouth College, is in actuality a private university. Twelve are private senior colleges: one, Colby-New Hampshire, has a few baccalaureate programs but these are recently inaugurated and the bulk of its students are at the junior college level; four are associated with Catholic religious orders. Seven are state junior colleges operated by the Post-secondary Education Division of the State Department of Education; these confine their programs to the vocational-technical fields. Three are non-profit private junior colleges, of which one is operated by a Catholic religious order and offers only a secretarial program. Three are proprietary business junior colleges. Two of the proprietary business colleges will consolidate in the fall of 1973.* One of the senior colleges, Canaan, will not continue in 1973-74. The Merrimack Valley Branch of the University of New Hampshire will become a separate state college in the near future. Franklin Pierce College is opening a law school in Concord in September 1973.

In addition to the twenty-nine New Hampshire colleges, there is in Harrisville, N. H. a branch of the Antioch Graduate School of Education, which formerly was in Putney, Vermont. It in 1972-73 enrolled 138 students, of whom thirteen were from New Hampshire. It was approved for teacher education by the New Hampshire State Department of Education in the spring of 1973. Its degrees are granted by the parent institution. Since it has not yet started to file statistical reports with New Hampshire agencies, it is not included in the statistical studies in this report.

*After this report was completed, Belknap College announced that it would cease instruction in December 1973.

Table 1

RESIDENCE STATUS OF FULL-TIME UNDERGRADUATE AND UNCLASSIFIED STUDENTS IN NEW HAMPSHIRE COLLEGES, Fall, 1972

Colleges	In-State		Out-State		Foreign		Total
	No.	%	No.	%	No.	%	
Private senior colleges	2,057	18%	9,320	80%	188	2%	11,565
Private junior colleges	234	44%	301	56%	1	0%	536
Proprietary junior colleges	354	85%	60	14%	4	1%	418
Sub-Total, Private	2,645	21%	9,681	77%	193	2%	12,519
University system	8,172	65%	4,282	34%	62	1%	12,516
Vocational-technical colleges	1,451	88%	189	12%	3	0%	1,643
Sub-Total, Public	9,623	68%	4,471	32%	65	0%	14,159
Grand Total	12,268	46%	14,152	53%	258	1%	26,678

Source: HEGIS, Residence and Migration of College Students, Fall of 1972.

HEGIS is the acronym for Higher Education General Information Survey, a multi-part, annual statistical survey by the U. S. Office of Education. Copies of the reports from each New Hampshire college have been received by the Coordinating Board.

In New Hampshire there are no "community colleges" as understood nationally, but there are two "New Hampshire Type" community colleges,* Monadnock Community College in Peterborough and Lebanon College in Lebanon. To quote the booklet: "They are private, non-profit institutions offering a wide variety of courses usually during evening hours and at local high schools and other community-owned facilities.... They are self-supporting, having no capital plant investment of their own. Neither college grants degrees of any kind; nor do they offer programs of study or employ permanent full-time staff." From 1962 through 1970 Lebanon had 2,037 course enrollments, 48 per cent in business practices and 23 per cent in vocational-technical fields. During the same period Monadnock had 2,266 course enrollments, about three-quarters of them divided equally between business, education and liberal arts. As provided in the law (N. H. Revised Statutes Annotated, 292-A),# the Coordinating Board of Advanced Education and Accreditation designated the Monadnock courses in the field of education as equivalent to degree courses.

In the fall of 1972 the total undergraduate enrollment of the twenty-nine degree-granting institutions was 26,678 of whom 12,268, 46 per cent, were residents of the state. In the state institutions 68 per cent were in-state, 32 per cent out-of-state. For the private colleges the percentage in-state was 21, out-of-state 77, foreign 2. In the fall of 1968, the latest year for which complete figures are available, 37 per cent of New Hampshire residents in undergraduate education were enrolled outside New Hampshire.**

Statements of Presidents Regarding Their Colleges

A letter was sent to the presidents of all colleges inviting them to tell: what type of student they serve best; their strongest disciplines or programs; what characterizes the social life of their students; their plans or hopes for the future; their activities in continuing education and community service.##

* Robert English, with Albert Carlson, New Hampshire Type Community Colleges, Peterborough, N. H., 1971.

N. H. Laws of 1973, ch. 533, which established the Postsecondary Education Commission, repealed RSA 292-A, but provided that the two "community colleges" in existence could continue to have the privileges granted them in RSA 292-A.

**Coordinating Board of Advanced Education and Accreditation, About Higher Education in New Hampshire, p. 37.

##The letter is reproduced as Appendix A.

NOTES FOR TABLE 2, Facing Page

* Scores of freshmen on Scholastic Aptitude Test of College Entrance Examination Board.

@ Per cent of freshmen who were in top or low fifth of high school class.

Per cent of freshmen who were in top or low fourth of high school class.

TEXT OMITTED IN TABLE 2

Academic Plans

Rivier: Strengthen new majors in medical technology, business and special education; add communications, dietetics, American studies, and, with New Hampshire College and University Council, French-Canadian studies, and at the graduate level new programs in learning disabilities, business and medical technology.

St. Anselm's: Strengthen faculty by good recruitment; reaffirm the commitment of the college to the humanities; vocational and professional programs will have a practical limit; faculty strength and quality will be developed in certain key areas in the humanities (religious studies and philosophy) and social sciences; the curriculum is to retain its emphasis on the liberal arts with a better integration of the core curriculum.

University of New Hampshire: New School of Continuing Studies offers for commuters associate in arts on an "open-door" policy and bachelors of general studies; during past three years dropped two graduate and five undergraduate majors, added four graduate and ten undergraduate, considering adding eight graduate, eight bachelors and thirteen associate programs.

Community Service

Rivier: Cultural events open to area residents; physical facilities (including library) open to community groups; cooperation with New England Aeronautical Institute and Nashua Vocational-Technical College in offering community services and educational opportunities; bachelor degree program for employees of local Federal Aviation Administration.

Table 2

COLLEGE PRESIDENTS' DESCRIPTIONS OF THEIR INSTITUTIONS

Colleges	S A T* 500 Up	S A T* 400 Down	H.S. Rank Top	H.S. Rank Low	Student Academic Characteristics	Socio-Economic Characteristics	Geographic Source	Strongest Programs	Social Life
Senior Colleges									
Colby-N. H.	26%	31%	16@	8@	Over achievers, goal oriented.	Middle & upper middle class, professional & managerial; 11% on financial aid.	National; majority from eastern seaboard.	Assoc. in arts transfer, secretarial, paramedical.	Social li centers i good lect series, s
Franconia	55%	12%	15@	21@	Anyone seriously interested in college, self-motivated, transfers encouraged.	Parents mostly prof. or managerial; 30% on financial aid.	Northeast urban areas, trying to nationalize.	Flexibility, off-campus, artistic, little voc. preparation.	Partic. i governanc dent init cultural limited s
Mt. St. Mary	423 ave.		18@	11@	Average ability, mostly vague on objective.	Middle income, majority 1st generation to go to coll.; 56% on financial aid.	Mass. supplies largest no., bal. from northeast, N.H. declining.	English, dietetics, teacher prep., social welfare.	Campus so and athle activitie students cars.
N. H. College	18%	50%	18#	28#	Average student.	Wide range economically, socially & ethnically; 50% on financial aid.	Northeast.	Business, espec. accounting, management, business-educ. teachers.	Full cult & athleti gram, stu set dorm.
Notre Dame					Majority from upper half of class, but others admitted on counselor recommendations.	Middle income; many students partially or wholly self-supporting.	New England and other eastern states.	Med.tech., art, commercial design, teacher prep. incl. art, music, business.	1/3 stude homelike active w/ colleges, Manchester
Rivier	29%	20%	32@	3@	Career-oriented liberal arts, recog. merit other than educ., open admis. Cont. Studies.	1/2 of parents prof. or business, 1/2 middle income labor or service.	70% including part-time from N.H., balance other northeast.	Pre-med. & med. tech., social & behavioral sci., business, art, education.	Social li centers o joint act with near colleges.
St. Anselm's	39%	17%	20@	4@	Strong average type, goal oriented.	Middle income; 53% on financial aid; mostly Catholic.	New England, New York and New Jersey.	Biol., classics, chem., physics, geo. & urban studies, history, nurs.,pol.sci.	Out-state in dorms. upper cla campus, p limited,8
Keene State	479 ave.		41#	3#	Average student.	In-state both parents work, non coll. grad.; out-state parents coll. educated.	75% from N.H., 40% from Merrimack region, 20% from other N.E. states.	Teacher educ.; special educ. & phys.ed. strongest; liberal arts & science.	Frats., s ties, stu athletics & lecture door recr
Plymouth State	460 ave.		31#	9#	Out-of-state admissions selective, fall and spring admissions.	30% from families with income under $9,000.	70% from all sections of N.H., 20% from other N.E. states.	2/3 students in teacher prep., espec. biol., art, math., social sci., business.	Outdoor a vities, a campus or zations.
University of N. H.	Ag. 526 L.A. 536 Tech. 558 Bus. 506 Hlth. 512		54@	1@	Out-of-state selective, in-state upper 2/5 H.S. class, flexible, open door Continuing Studies.	25% on financial aid.			
Junior Colleges									
Castle			23@	6@	55% had college prep. H.S. programs, 45% bus.; average Otis I.Q. 110.	Parents have little postsec. educ., incomes limited.	Commuters from N. H. and nearby Mass.	Executive secretarial the only program.	Commuting emphasize activitie
McIntosh	485 ave.		24#	16#		Both parents usually work; some students work full shift.	Commuters from N. H. & nearby Maine.	Secretarial, accounting.	Commuting work limi activitie
New England Aeronautical Institute					Career oriented.	Middle class.	90% from New England.	Aviation, international careers, merchandising, business.	Athletics, student c organizat campus ho
N. H. Technical Institute					Wide range in age, 70% had college preparation high school programs.	All classes but upper income; 70% of parents no schooling above grade 12.	Primarily N. H., 60% commute.	Paraprofessional in computing, engineering, paramedical.	Active pr for dormi students.
Voc-Technical Colleges					Open door with guided placement.	Spread of econ. background; most parents skilled workers & high school grads.	Primarily commuting students.	Skilled occup. training, some 1-yr. programs, each college has specialties.	Commuting work de-e activitie

TITUTIONS

ngest rams	Social Life	Plans: Academic	Plans: Enrollment	Plans: Plant	Continuing Education	Community Service
c. in arts sfer, sec- rial, para- ical.	Social life centers in dorms; good lecture series, skiing.	Increase baccalaureate programs.	Increase 4 to 6% a yr. until enrollment is 700 to 750.	None	Considering a few night courses.	
ibility, campus, istic, le voc. eration.	Partic. in coll. governance, student initiated cultural events, limited sports.	Establish an anthropological Navajo field station, participate in Univ.w/o Walls, expand B.A. programs.	Increase 10 to 25 a yr. until 400 on-campus & 100 off-campus.	Science bldg. studio, child center, libr. add., dining, dorms.	Offers special courses free to area residents.	No. Country Center for Comm. serv., nursery sch., ed. progr. for prisoners, participation in community.
lish, tetics, her prep., ial welfare.	Campus social and athletic activities, students allowed cars.	Studying 3-yr. degree program, would like more male cooperative students.	Want 500, but recruitment is difficult.	No bldgs. but develop 575 acre campus as outdoor area.	Confined to summer institutes for teachers.	Helped sponsor & houses day-care center, comm. uses bldgs., consider. joint use of library, cultural events free.
iness, c. account- management, iness-educ. chers.	Full cultural & athletic program, students set dorm. rules.	Strengthen present programs, add master of business administration.	Grow at a nominal rate.	Expand library, TV & Computer facilities.	Night programs fastest growing segment, expect to equal day enroll.in few years.	Upward Bound prog., partic. Manch. Model City Proj., community conferences especially in business.
tech., art, ercial de- n, teacher p. incl. art, ic, business.	1/3 students in homelike dorms., active w/nearby colleges, buses to Manchester.	New behavioral science major.		Student center and more library space.	Evening and summer courses offered.	
-med. & med. ., social & avioral sci., iness, art, cation.	Social life centers on campus, joint activities with nearby colleges.	See facing page.	Aims at 275 res., 225 commuters, 750 pt-time, 400 in summer.	Addition to library; multi-purpose academic bldg.	Cont. ed. for 25 yrs., rotates courses, degrees in bus., Eng., educ., soc.sci.	See facing page.
l., classics, ., physics, & urban dies, history, ., pol.sci.	Out-state students in dorms., 40% upper class off campus, parietals limited, 80% athlet.	See facing page.	To hold about the same.	Student activity bldg., theater, playing fields.	Under consideration.	Urban studies courses, students volunteer in community and state groups.
her educ.; cial educ. & .ed. strong- ; liberal & science.	Frats., sororities, student gov., athletics, concert & lectures, outdoor recreation.	Expand. continuing educ. prog., decrease emphasis on profes. educ., calendar change to intersess.	Gradual increase to 2800 to 3000 by 1980.	Remodeling Elliot Hosp., mini-dorms., arts center.	Open admissions to part-time students, offers non-credit courses for careers.	Special educ. clinics, concert and lecture series, summer theater.
students in her prep., c. biol., art, ., social ., business.	Outdoor activities, and campus organizations.	Reduce student-faculty ratio, increase support staff, enrich libr., add assoc.pro.-gen.ed.	Expects 3300 full-time equivalent by 1980.	More space for academics, phys. educ. housing & serv. facil.	Will expand as part of the Univ. System School of Cont. Studies.	Free science upgrading for area elem. teachers, child art workshop, students vol. in comm. activ.ecology studies.
		See facing page.	Major growth seen at Merr. Br. and in Assoc. degree programs.	$11,910,000 for acad. bldgs., $5,063,000 for dorms.	Sch. of Cont. Studies, offers assoc. & bach. degrees in Gen. Studies.	Spent $4,828,995 on extension & public service activities in 1971-72.
cutive retarial only gram.	Commuting de-emphasizes activities.	No expansion.	One-third gain by 1973-4.	None	Admits adults, plans summer sch. considering night classes.	
retarial, ounting.	Commuting and work limit activities.	No expansion.	Hope for increase, plant could handle 200.	None	Local high sch. now fills the need for night courses.	
ation, inter- ional careers, chandising, iness.	Athletics, active student center & organizations, campus housing.	Strengthen career orientation.	Plans to level off at about 500.	To have 8 buildings by 1973.	Courses for local residents.	
nprofessional computing, ineering, medical.	Active program for dormitory students.	Considering programs in social service field.	Expect to reach 600 soon, 1200 by 1980.	Expand to meet growing enrollment.	Wide range of extension courses.	Facilities used by community.
lled occup. ining, some r. programs, h college has cialties.	Commuting and work de-emphasize activities.	New courses to meet area needs.	Expect 400 by 1975, 600 by 1980, with Manch. & Nashua 1,000.		Extension courses offered.	Sharing faculty expertise and facilities with their communities.

Replies of varying comprehensiveness were received from fifteen institutions plus one covering the six state vocational-technical colleges. (Information for Franconia College and the University of New Hampshire was taken from self-evaluations prepared for the New England Association of Schools and Colleges.) As the inquiry was open-ended in nature, summarization of the replies was difficult. Each president was given an opportunity to check the summarization regarding his institution. The information is condensed in Table 2. The financial plans are not included in the table because they can be grouped by type of institution: the two-year business schools expect to continue to operate on income from tuition; the private colleges are seeking new sources of contributions; the state institutions are seeking added state funds to improve offerings and reduce tuition.

Major Programs Offered

A complete listing of all major programs offered in the state was published in 1971.* In the fall of 1972 registrars of the several colleges were asked to report on major programs that would be eliminated or added by the fall of 1973. (This inquiry was apart from the plans of presidents, reported in Table 2.) Many of the changes reported were in the nature of redefining or altering majors already offered. In addition to the changes reported by the presidents, three women's colleges (Mount St. Mary, Notre Dame and Rivier) have or will add associate degree programs in business or medical laboratory fields or liberal arts. Also at the associate degree level New England Aeronautical Institute has added professional pilot training, merchandising, and foreign language secretarial training; New Hampshire College is adding fashion merchandising; White Pines College is adding child care; the Merrimack Valley Branch of the University of New Hampshire is offering an associate in arts degree with several options, and it is planned to design the programs at all levels at the Branch to meet community needs.

At the baccalaureate level Keene State College has added art, music, three science majors, American studies, finance, sociology, and special education; Mount St. Mary College is dropping chemistry, humanities, and sociology; New England College is adding management programs; New Hampshire College is adding hotel administration; Notre Dame College is adding early childhood and special education; Rivier College has dropped accounting and is adding medical technology, special education, and psychology; St. Anselm's College has added urban studies.

*About Higher Education in New Hampshire, pp. 14-19.

Master's degrees added are: Dartmouth - engineering sciences, physiology, pharmacology, psychology, and "liberal studies" which is designed for teachers in service; Rivier - social science; University of New Hampshire - physical education. Dartmouth has added a doctorate in biochemistry.

In 1973-74 there will be offered by New Hampshire colleges approximately 38 degree programs at the associate level, 94 at the baccalaureate, 3 at the first professional, 45 at the masters, 20 at the doctoral, and one certificate representing two years of graduate study.

Of the 38 associate degree programs, all but seven are available at one or more of the public institutions. All of the institutions, public and private, attempt to adjust their offerings to current needs. The Division of Post-secondary Education of the State Board of Education has lay advisory committees and an active planning office in order to enable it to adjust its programs to changing occupational needs. The flexibility of the vocational-technical group is severely limited by being on a line-item budget established biennially by the Legislature. No new program may be established unless the school officials are able to convince the involved legislative committees that spending money for it takes precedence over some other demand for the limited financial resources of the state. Conversely, as with the typical governmental activity, once established and funded a program is likely to continue in the budget regardless of changing conditions. The legislature has never of its own volition eliminated a program, although several have been eliminated on the initiation of the State Department of Education. Even if a recommended change is agreed to by all, operation of the governmental budgetary machinery introduces a two-year lag. The legislature has blocked the establishment of a number of recommended programs. The State Department of Education makes what adjustments it can to meet changing conditions, but the rigidity of the budget reduces its efficiency in this respect, thus limiting its ability to be of the most service to the youth and industry of the state.

One or more of the units of the state University System offers all but sixteen of the 94 baccalaureate programs, 69 being available on the Durham campus. The variety of offerings at this level is generous, meeting the needs of all but a rare individual. From the point of view of present occupational opportunities, there is an over-abundance of teacher training facilities in many disciplines and inadequate opportunities in the health field. (See below, pages 19-28 and Appendix B).

Graduate work is offered by five institutions. Keene State and Plymouth State limit their offerings to education at the masters level. Rivier has broader offerings at the masters level, with nearly all of its graduate work done by part-time students in evening and summer courses. Dartmouth has substantial graduate and professional programs enrolling, in the fall of 1972, 473 full-time students, of whom seventeen per cent were New Hampshire residents. Its professional degrees - in business, engineering, and medicine - are the only ones offered in the state although the University of New Hampshire offers comparable graduate work in the first two. The University enrolled at Durham (fall of 1972) 711 full-time graduate students of whom 60 per cent were in-state. In addition to these full-time graduate students, the University counted 235 part-time. There are in New Hampshire at this writing no opportunities to study law, dentistry, veterinary medicine or other similar professions.* Franklin Pierce College is opening in September 1973 a Law Center in Concord, New Hampshire. New Hampshire residents may enroll, at in-state tuition rates, in the law schools of the Universities of Connecticut and Maine under the Regional Student Program of the New England Board of Higher Education. (See below, pp 81-83).

Commuting Possibilities in New Hampshire

One measure of the availability of college education for a potential student is to have a college within commuting distance of his home. "Commuting distance" is an uncertain term, but a widely accepted definition is twenty-five miles. Commuting is feasible, if not so convenient, for distances greater than twenty-five miles. Directness and quality of roads and density of traffic as well as air-line distance are factors. Density of traffic is not a factor in a state such as New Hampshire.

To get an approximate measure of how many New Hampshire undergraduates were attending college (in 1972) within twenty-five miles of their homes, lists of the zip codes of the home addresses of the students were requested from the colleges. (Lists were not received from the Vocational-Technical Colleges of Berlin and Claremont, so they have not been included in this study. White Pines College also was excluded because due to a misunderstanding or error more than 100 per cent of its in-state students were listed as being within twenty-five miles.)

*For a discussion of the training of the professional men practicing in New Hampshire see, About Higher Education in New Hampshire, pp. 23-29, and the New England Board of Higher Education's 1973, the Need for a College of Veterinary Medicine in New England. For inter-state cooperation in graduate and professional training, see below, pp. 81-83.

If more than half of the area covered by the zip code of a student was within twenty-five miles of the college he attended, he was considered to live within this radius. This assumption obviously resulted in a slight extension of the twenty-five mile distance for some students, but as some students living on the near side of borderline excluded zip code areas were not counted, the error was largely self-correcting. No account was taken of the directness of roads.

The results of the study are given in Table 3. The location of a college in or near a population center would be expected to be a major factor in this matter, but the relationship is not universal. New Hampshire College, in the state's largest city, has one of the smallest percentages of nearby residents and New England College, fifteen miles from the nearest city, one of the largest.

The enrollments of the Vocational-Technical colleges are, as intended, drawn principally from nearby areas. The four church-related colleges are consistently high in this regard. These figures relate only to students living in New Hampshire. All colleges in the state except Plymouth State, New England College, Laconia Vocational-Technical College, and the New Hampshire Technical Institute are within twenty-five miles of the border; some of them draw heavily from nearby out-of-state areas.

Figure 1 shows the location of all the two-year colleges; Figure 2, the same for the senior institutions. The arcs show the territory within twenty-five miles of the several public institutions. The three original University System campuses - Durham, Keene, and Plymouth - were well distributed except that due to the nearness of Keene and, especially, Durham to the state's border the populous lower Merrimack Valley region was not served by a nearby institution. It is this that led to the establishment of the Merrimack Valley Branch of the Durham campus. The sparse population of the territory north of Plymouth would not contribute many students to a senior college in that area.

The vocational-technical institutions were planned as a statewide system, with the result that in general they give reasonable coverage to the entire state. Had politics not entered into the planning of the system, one large institution in or near Manchester would adequately, and more efficiently, have served the territory now divided between the campuses in Concord, Manchester, and Nashua. Keene State College serves its region with some of the mechanically-oriented associate degree programs elsewhere offered in the vocational-technical colleges.

Table 3

PERCENTAGES OF IN-STATE UNDERGRADUATE STUDENTS
WITHIN COMMUTING DISTANCE OF THE COLLEGES ATTENDED
Fall of 1972

College	In-State Enrollment	Percentage Within 15 Miles	25 Miles
Private 4-Year			
Belknap	73	29%	37%
Canaan	12	75	75
Colby - N. H.	74	0	0
Franconia	29	14	17
Nathaniel Hawthorne	38	47	76
New England	158	65	84
New Hampshire	627	21	28
Franklin Pierce	48	35	48
Sub-Total, Private	1059	28	38
Church-Related			
Mount St. Mary	63	60	71
Notre Dame	207	89	95
Rivier	172	81	88
St. Anselm's	362	54	75
Sub-Total, Church Related	804	69	83
All Private 4-Year	1863	46	57
Dartmouth	194	28	32
Public 4-Year			
Keene	1542	10	15
Plymouth	1598	11	21
University of N. H.	4916	38	43
Sub-Total, University System	8056	27	33
Private 2-Year			
Non-Profit			
Castle	56	79	82
New Eng. Aero. Inst.	145	8	9
Sub-Total, Non-Profit	201	28	29
Proprietary			
Concord	90	52	76
Hesser	102	63	75
McIntosh	68	81	84
Sub-Total, Proprietary	260	64	78
Public 2-Year			
Technical Institute	392	22	51
V-T, Laconia	189	47	67
V-T, Manchester	195	65	88
V-T, Nashua	185	85	97
V-T, Portsmouth	141	77	88
Sub-Total, V-T Colleges*	710	68	85
Grand Total	11676	33	42

*N. H. Technical Institute not included in Vocational-Technical Colleges total.

Figure 1

JUNIOR COLLEGES IN NEW HAMPSHIRE

and

THIRTY-FIVE MILE COMMUTING

ARC OF PUBLIC INSTITUTIONS

Key

● Public Two-Year Colleges

○ Private Two-Year Colleges

are counties with populations over 200 to the Square Mile.

are counties with populations 50 to 100 to the Square Mile.

White areas are counties with populations under 50 to the Square Mile.

College Identification

1 Berlin Voc-Tech
2 Laconia Voc-Tech
3 Claremont Voc-Tech
4 N.H. Tech. Institute
5 McIntosh College
6 Portsmouth Voc-Tech
7 Manchester Voc-Tech
8 Hesser College
9 White Pines College
10 Castle College
11 Nashua Voc-Tech
12 New England Aero. Inst.

Figure 2

SENIOR COLLEGES IN NEW HAMPSHIRE

and

TWENTY-FIVE MILE COMMUTING

ARC OF PUBLIC INSTITUTIONS

Key

Public Private

■ □ Universities

▲ △ Senior Colleges

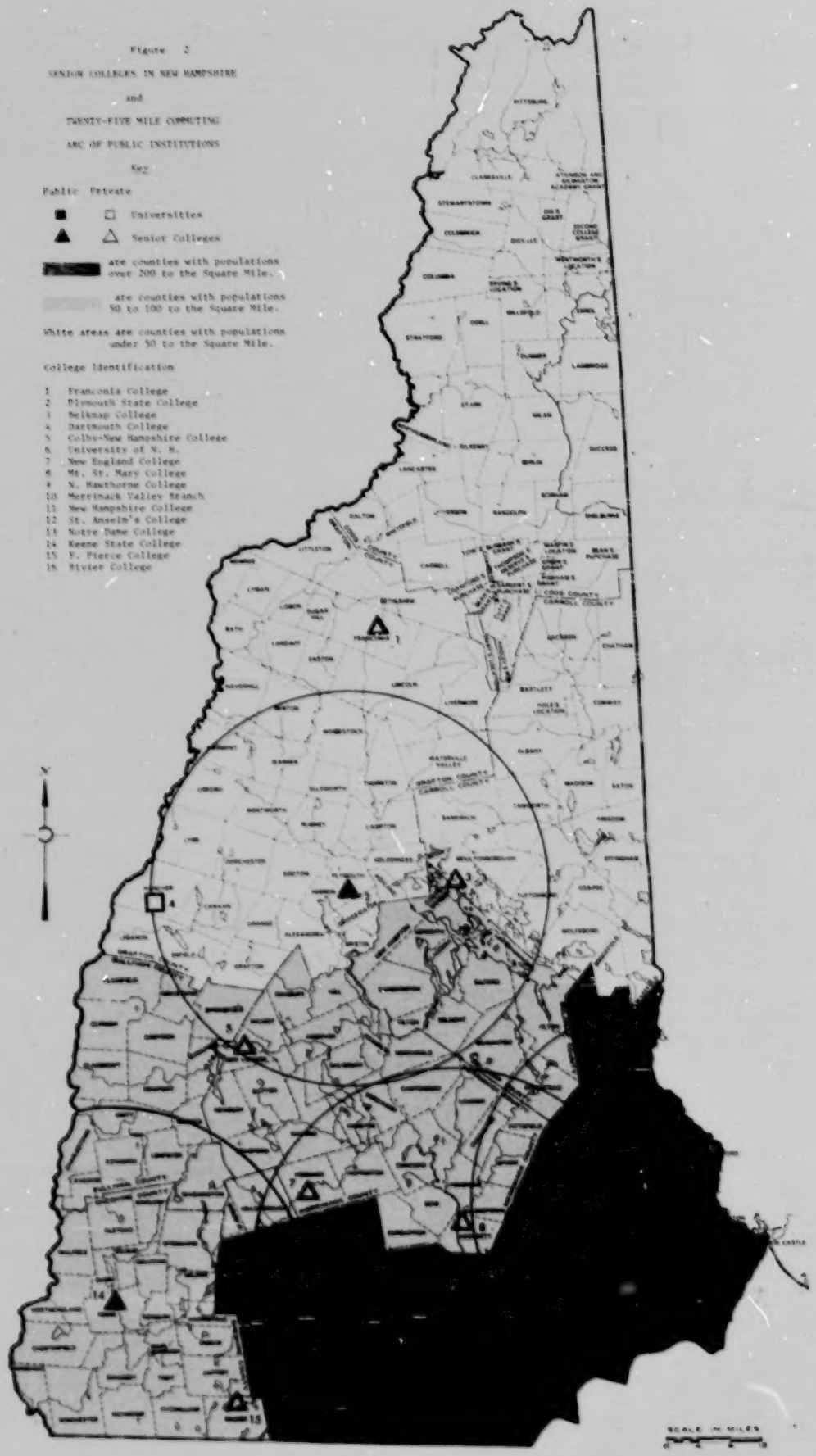
▬ are counties with populations over 200 to the Square Mile.

▒ are counties with populations 50 to 100 to the Square Mile.

White areas are counties with populations under 50 to the Square Mile.

College Identification

1 Franconia College
2 Plymouth State College
3 Belknap College
4 Dartmouth College
5 Colby-New Hampshire College
6 University of N. H.
7 New England College
8 Mt. St. Mary College
9 N. Hawthorne College
10 Merrimack Valley Branch
11 New Hampshire College
12 St. Anselm's College
13 Notre Dame College
14 Keene State College
15 F. Pierce College
16 Rivier College



No state-wide planning, of course, entered into the choice of location for the private colleges. Dartmouth was established in Hanover in pioneer days to Christianize the Indians in the neighborhood, no longer one of its major functions. The large Catholic population of the area attracted the four church-related colleges to the lower Merrimack Valley. Most of the others are in their present locations because of the availability of large country estates no longer occupied by their original owners.

Proprietary Postsecondary Education

This present study was initiated to plan for higher education in the state. With the passage by Congress of the "Education Amendments of 1972" (Public Law 92-318) it became apparent that state-wide planning would need to be broadened to cover all postsecondary education, - public, non-profit, and proprietary, - and that not creditable toward a degree as well as that which is. Consequently, the Resources Development Center of the University of New Hampshire was commissioned to make a study, directed by Owen B. Durgin, of proprietary schools in the state.

Durgin found that, exclusive of the degree-granting business schools included with the two-year colleges elsewhere in this report, there were only sixteen proprietary vocational schools in the state, enrolling 305 students in the spring of 1973. Their enrollment has not changed much during the past five years. Most of these schools trained beauticians or barbers. Tuition for a one-year course generally ranged from $800 to $950.

Most of the students were of normal college age. Except that the educational level of the fathers tended to be lower, the students were representative of the socio-economic status of the state population.

The schools emphasized the personal attention given the students, which given their size would seem to be axiomatic. The students were supportive of the institutions and felt that generally the training they had received had resulted in their getting better jobs, although their incomes were only average for the state.*

*Owen B. Durgin, Proprietary Vocational Educational Training Program Survey, Durham, N. H., Resources Development Center, August, 1973.

Another related investigation has been conducted by Decision Research, Inc. of Manchester, directed by Benjamin Donatelli, to prepare an educational plan for the Model City project in Manchester. The uncertainty of funds to continue the Model City project has put that endeavor in limbo.

Distribution of Graduates by Disciplines

The relative distribution of students in the different fields of study may be judged from the figures on degrees granted in 1971-72 as shown in Table 4. In that table the degrees are grouped by disciplines as suggested in HEGIS. Of the vocationally oriented fields, business, when computer training is included, appears to rank first with education a close second. Education doubtless should be first, because the degrees granted those preparing at the baccalaureate level to teach academic subjects in the secondary schools are graduated with academic majors, and so are not counted with the education majors. Degrees in the health fields totaled a little over 300, well less than a third of those in education. There has developed an oversupply of certified teachers, while it is agreed there is an undersupply of trained personnel in the health field. Because of the situation in teacher education, Dr. W. Timothy Weaver was commissioned to study it in depth.* The comments which follow are based on Weaver's findings.

The Shrinking Demand for Teachers. For a century the school attendance in the country, and New Hampshire, has expanded steadily and of-late rapidly. As the ratio of teachers to pupils has been rather constant, this has meant a long-time growth in the demand for teachers. A forecast by the New Hampshire State Department of Education shows enrollment in the public schools growing about 1 per cent a year for the next decade, compared with 3 per cent for the past decade. One by Owen B. Durgin of the Resources Development Center of the University of New Hampshire, combining public and parochial school populations, indicates no observable growth in the next few years.#

The school drop-out rate, which has been one factor in the growth of high school enrollment, appears to have stabilized. Compensatory education for children from poor home backgrounds, which substantially increases the ratio of teachers to pupils, is likely to contract rather

*Weaver's study on teacher training is given in full in Appendix B.

#Owen B. Durgin, Report to Sackett & Associates, Post Secondary Education Projections, June 1973.

Table 4

DEGREES GRANTED BY NEW HAMPSHIRE COLLEGES
July 1, 1971 to June 30, 1972

	Private Colleges											Sub-	Public Colleges								Sub-	Grand
Associate Degrees	B	Co	CC	F	HE	MI	NEA	NH	ND	SA	WP	Total	K	TI	VB	VC	VL	VM	VN	VP	UT	Total	Total
Arts & Science	4	223		46			78				14	365									12	12	377
Data Processing			73									73		31								31	104
Health Services	1										9	10		65						31	17	113	123
Mech. & Eng. Tech.							7					7	12	70	48	27	28	95	19	63	8	370	377
Natural Sci. Tech.															6						63	69	69
Business & Commerce			16		33	33	21	46	3			152				7	8		25		26	66	218
Public Service		46								4		50											50
Totals	5	269	89	46	33	33	106	46	3	4	23	657	12	166	54	34	36	95	44	94	126	661	1318

	Private Colleges								Sub-	Dart-	Church-Related				Sub-	State			Sub-	Grand
Bachelor Degrees	B	C	Co	F	H	NE	NH	FP	Total	mouth	M	ND	R	SA	Total	K	P	U	Total	Total
Agriculture																		82	82	82
Architecture																		9	9	9
Area Studies										5										5
Biological Science	4				6	5		11	26	49		6	7	28	41	6	17	113.5	136.5	252.5
Business & Manage.	23				63	48	226	36	396	9	2	9	2		13		45	143	188	606
Communications										1								14	14	15
Computer							27		27											27
Education	7			2		24	8		41		23	62	69		154	213	212	174	599	794
Engineering						10			10	50				3	3			105	105	168
Fine & Appl. Arts				7	14	15		11	47	25		13	8		21		5	62	67	160
Foreign Language						1		3	4	40	2	9	6	4	21	10	6	36	52	117
Health Professions			16						16			4		67	71			70	70	157
Home Economics											4		4		8			69	69	77
Letters	9	8		5	8	34		26	90	142	6	11	12	40	69	27	25	147	199	500
Mathematics	2	2				4			8	30	1	3	6	4	14	6	4	49	59	111
Physical Science	33				1	5			39	47			2	16	18	3	1	37.5	41.5	145.5
Psychology	7	5		4	16	19		40	91	70						23	10	62	95	256
Public Affairs																		79.5	79.5	79.5
Social Sciences	7	7		3	17	29		43	106	298	16	15	19	115	165	79	57	367.5	503.5	1072.5
Interdiscip.Stud.		2						1	3	13		1			1					17
Totals	92	24	16	21	125	194	261	171	904	779	54	133	135	277	599	367	382	1620	2369	4651

	Masters Degrees						Doctorates			First Profes.	Grand
Graduate Degrees	Dart.	Keene	Plymouth	Rivier	U.N.H.	Total	Dart.	U.N.H.	Total	Dartmouth	Total
Agriculture					17	17					17
Biological Sci.	1			5	25	31	2	21	23		54
Bus. & Manage.					20	20				128(M.B.A.)	148
Education		59	24	18	137	238					238
Engineering	8				35	43	6		6		49
Foreign Language				15	8	23					23
Home Economics					2	2					2
Letters			2	3	21	26		1	1		27
Mathematics	4				25	29	7	3	10		39
Physical Science	11				25	36	6	10	16		52
Psychology					9	9	3	4	7		16
Social Science			3		49	52					52
Interdiscip.Stud.	1					1					1
Medicine										37(B.M.S.)	37
Totals	25	59	29	41	373	527	24	39	63	165	755

Key: B-Belknap; C-Canaan; Co-Colby; CC-Concord College; Dart-Dartmouth; F-Franconia; H-Hawthorne; HE-Hesser; K-Keene; M-Mt.St.Mary; MI-McIntosh; NE-New England College; NEA-New Eng. Aero; ND-Notre Dame; NH-New Hampshire College; FP-Franklin Pierce; P-Plymouth; R-Rivier; SA-St. Anselm's; TI-Technical Institute; U-Univ. of N. H.; Vocational-Technical Colleges, VB-Berlin; VC-Claremont; VL-Laconia: VM-Manchester; VN-Nashua; VP-Portsmouth; UT-Thompson School, U.N.H.; WP-White Pines.

Source: HEGIS Reports.

than expand. Much of this has been supported by federal funds, which are drying up and are unlikely to be replaced by local funds. One area which is likely to expand is pre-primary schooling. This is growing nationally and probably in New Hampshire, but the only state statistics in this area are the enrollments in those public school districts maintaining kindergartens.

Stabilizing school enrollment combined with an increase in the production of teachers caused a severe shortage of teachers in 1966 to become a sizeable surplus by 1972. This is a national situation shared by New Hampshire, especially as teachers move freely across state boundaries. The excess of new teachers probably will tend to lessen in view of the present situation. Those graduating from teacher-preparation programs in 1972 in most cases started their training four years earlier, when there still were shortages of personnel in many teaching fields, and the reversal of the condition was not foreseen. The present situation will cause students starting their training now to look to other fields. (See below, p. 41). In some educational fields there still are shortages: industrial arts, administration, vocational education, and counseling, for example.

To find out what steps they might be taking to adjust to the changing conditions, Weaver visited the three units of the University System, which together account for two-thirds of the teacher production, and two of the private colleges with large teacher preparation programs, Notre Dame and New England Colleges. He was told that the University of New Hampshire is planning to phase out its baccalaureate teacher training programs by 1975, expanding its fifth-year Master of Arts in Teaching as an alternative. It is estimated that this will cut the production of teachers approximately in half when the new program is fully operational. Keene State College is planning to reduce the number of students admitted to teacher training programs by about 50 per cent, raising the academic average minimum requirement as one means of selection.

Plymouth State College does not intend to set an academic hurdle to be passed by candidates for teacher training. It is planning, however, to make classroom observation and participation a requirement of the sophomore year and to counsel out of the program those who do not adjust well to the classroom situation. It also is adding programs in other fields for those not showing promise as teachers.

New England College has been encouraged by the State Department of Education to reduce the number of students in its education program. It plans to screen out the bottom 5 to 10 per cent of the candidates at three points during the sophomore and junior years. It also expects to

add a major in education for those who select it as a discipline but who do poorly in student teaching. They would not be eligible for certification. Notre Dame has no present plans to alter its teacher training program, but it is giving more emphasis to other programs.

Courses in teacher training programs at the baccalaureate level are not confined to preparation for classroom duties. They generally have a liberal arts base and consequently those graduating in them have background for other employment opportunities. In commenting on this, Weaver says: "Another opportunity or option is to shift in focus from the public and regular non-public schools as the primary market for teacher production to a much broader market concept including adult training and education-related fields, such as family services, social work, vocational rehabilitation, or education and training in the private sector and in the military....What is needed is a broadening of the training concept that will prepare graduates to seek employment in more than one kind of institution."

The Shortage in Health Manpower. In health manpower, the situation is the reverse of that in education. A survey conducted by the New Hampshire Health Careers Council in 1968 resulted in an estimate that the positions in the health field, excluding physicians and dentists, would increase by 38 per cent by 1975, as shown in Table 5. These results are in line with national studies. A study five years old is not a reliable guide for projecting the needs in this field in 1973. The Health Careers Council has a follow up of this study underway at present that includes not only labor market growth or decline figures in the health services but also data concerning mobility trends of New Hampshire health education program graduates. What follows will have to be reviewed in the light of these current findings, when the study is completed.

New Hampshire production of health manpower is shown in Table 6. The Technical Institute and the Vocational-Technical colleges are seen to be a major source of the state's supply. This is a new resource. Five of the seven institutions have been established within the past eight years, and the associate degree programs in the health field were not started at the Technical Institute until 1970. Applications for these programs have been running three times the available openings. The baccalaureate health programs in the private colleges have been in operation for some years, but the womens' colleges are now showing interest in associate degree programs for medical laboratory technicians and other health care fields.

Table 5

ESTIMATED GROWTH IN NEW HAMPSHIRE
HEALTH MANPOWER, 1968-1975

	Health Occupations	1968 Employment in N. H.	1975 Employment Projection	% Increase in N. H. by 1975
1.	Registered Nurse	3,451	4,402	28 %
2.	Nurse Anesthetist	34	49	44
3.	Licensed Practical Nurse	971	1,608	65
4.	Nurses Aid	3,378	4,242	25
5.	Orderly	150	360	140
6.	Psychiatric Aide	639	684	7
7.	Home Health Aide	4	26	550
8.	Med. Technologist	119	191	60
9.	Medical Technician	124	153	23
10.	Cytotechnologist	6	15	150
11.	Laboratory Assistant	69	101	46
12.	Histologic Technician	15	28	86
13.	Radiological Technologist	130	173	33
14.	Electroencephalograph Technologist	3	4	33
15.	Electrocardiagram Technologist	16	24	50
16.	Nutritionist	12	19	58)
17.	Dietitian	68	163	139)
18.	Food Service Supplier	59	75	27
19.	Occupational Therapist	45	114	153
20.	Occupational Therapist Aide	19	46	142
21.	Physical Therapist	78	177	126
22.	Physical Therapist Aide	26	66	153
23.	Recreational Therapist	20	47	135
24.	Speech Pathologist	20	42	110
25.	Inhalation Therapist	19	53	178
26.	Medical Record Librarian	26	44	69
27.	Medical Record Technician	44	67	52
28.	Medical Secretary	331	545	64
29.	Medical Assistant	506	572	13
30.	Psychologist	58	81	39
31.	Social Worker	272	473	73
32.	Social Worker Aide	20	71	255
33.	Rehabilitation Counselor	3	17	466
34.	Health Education	3	14	366
35.	Optician	2	4	100
36.	Pharmacist	48	69	43
37.	Sanitary Engineer	22	31	40
38.	Dental Hygienist	276	518	87
39.	Dental Assistant	552	725	31
40.	Dental Lab. Technician	210	293	39
	Totals	11,848	16,386	38

Source: New Hampshire Health Careers Council study of 1968.

Table 6

NEW HAMPSHIRE PRODUCTION OF HEALTH MANPOWER
By Private Colleges, Vocational Technical
Institutions, University, and Hospitals

Health Occupations	Private Colleges		Voc-Tech. Institutions		University		Hospitals
	1971	1972	1971	1972	1971	1972	1971
Dental Hygienists	0	0	0	24	0	0	0
Dietitians	5	2	0	0	3	0	0
Dietitic Technician	0	0	0	0	0	13	0
Histological Technologist	0	0	0	0	0	0	1
Laboratory Assistant (CLA)	5	0	10	10	0	0	0
Medical Laboratory Assistant	0	0	20	10	0	0	0
Medical Laboratory Technician	4	17	0	0	0	0	0
Medical Record Librarian	1	0	0	0	0	0	0
Medical Secretary	19	0	0	0	0	0	0
Medical Secretary/Med. Asst.	5	0	0	11	0	0	0
Medical Technologist	28	20	0	0	15	12	0
Licensed Practical Nurse	0	0	79	85	0	0	47
Registered Nurse	37	67	0	41	27	18	149
Occupational Therapist	0	0	0	0	24	24	0
Occupational Therapist Aide	0	0	0	0	0	0	24
Radiologic Technologist	0	0	0	7	0	0	22
Social Worker Assistant	9	9	0	0	0	0	0
Speech Pathologist and Audiologist	0	0	0	0	16	16	0
Nurse Anesthetist	0	0	0	0	0	0	5
Totals	113	115	109	188	85	83	248

Source: 1971, from Health Careers Council; 1972, HEGIS Reports; no 1972 reports for hospitals were available. Some of the Vocational-Technical programs graduated their first students in 1972.

The University of New Hampshire programs in medical technology, occupational therapy, and speech pathology have been established for many years; nursing is more recent. Added emphasis was given to the institution's efforts in this field with the transfer in 1969 of the health programs from the College of Liberal Arts to a new School of Health Studies. Limitation of state appropriations and shrinking federal grants threaten planned expansion of programs. There are no health programs at the two state colleges.

A conference at the New England Center in Durham in June 1973 of those engaged in the training of medical laboratory personnel reviewed progress and problems in this field. Increasing difficulty in arranging suitable clinical experience in hospital laboratories was reported by all the institutions. It was foreseen that the situation would worsen. One reason is growing enrollments. A serious development is the requirement that hospitals no longer may charge their expenses for training activities as part of their overall costs for patient care. The cutting off of federal support for some of the programs increases the financial crisis. A tightening of the job market also was reported.

The Tri-State Regional Medical Program during 1973 conducted a Delphi seminar type study of health manpower development in the state.* Participation was secured from 263 individuals, most of them engaged in the health field or in programs of training for it. Conclusions of the study included the following:

Continuing education was by far the area in which respondents felt the greatest need for change or improvement....One specific concern in continuing education was the need for effective utilization of community resources. The state University System is not, to any degree, offering continuing education courses at convenient geographical locations for health personnel, nor is it effectively utilizing excellent facilities such as the vocational-technical institutes or community hospitals. Establishment of the University's School of Continuing Studies offers an opportunity to remedy this situation. Another important concern is that credit be given for continuing education courses to be applied toward a degree or diploma. Individuals no longer want to invest time and money in continuing education without the incentive of receiving college credit, an increase in salary, or job advancement. It would be self-defeating for the State Department of Education, the

*Robert F. Gloor, M.D., and Lillian McMullen, Framework for the Education of Health Manpower in New Hampshire, Concord, N. H., Tri-State Regional Medical Program, June 1973.

University of New Hampshire, or private colleges to begin planning for an extensive, state-wide continuing education program without offering credit for the courses in such a program.

Still another concern expressed was the need for a single, state-wide crediting system. This would eliminate the loss of credits when transferring between the various colleges, the University, and hospitals offering health care education. An example of this is the difficulty which now exists with a diploma school nursing student or graduate applying to the University of New Hampshire B.S. nursing program - little or no credit is given. A similar concern emerged from Part 2 of the first round Delphi when respondents suggested credit be given for continuing education courses in advanced nursing to be applied to a Masters degree. At present, there is no program in the state of New Hampshire which offers a Masters degree in nursing. Interest was also expressed in an expanded role for the nurse as a nurse practitioner.* Needs reported as top priority in this study are listed in Table 7.

The interest of those participating in the Delphi study in opportunity for health personnel to advance from one level to another draws attention to a recent planning project in this matter by the New Hampshire Health Careers Council for the New Hampshire Division of Vocational-Technical Education. Recommendations included the following:

> That a planned sequential educational process be instituted in the allied health occupations.
>
> That the Department of Education and the University of New Hampshire place greater stress on articulation of the various levels of education.
>
> That a core curriculum for allied health occupations be developed by the combined efforts of the University of New Hampshire, the New Hampshire Department of Education, other colleges preparing allied health personnel, and the allied health occupations concerned.
>
> That equivalency examinations be evolved to measure past academic achievements and experiences to afford students advanced placement for career mobility.

*Ibid, pp. 30-31.

Table 7

HEALTH CARE EDUCATION NEEDS CONSIDERED TO BE TOP PRIORITY BY MORE THAN 33 PER CENT OF RESPONDENTS IN DELPHI STUDY*

Rank	Health Care Education Needs	Respondents	
		No.	%
1	Effective utilization of community resources in developing and offering continuing education	108	51.4
2	Single, authoritative crediting system responsible for area-wide or state-wide accreditation	106	50.5
3	Eliminate credit loss in transfers from diploma school to BS nursing program curriculum, instruction and development of new program	103	49.0
4	Continuing education offered primarily in educational institutions (colleges, university, voc-tech.)	98	46.7
5	Programs that promote interchange of ideas and experiences among administration, medical staff, nurses, allied health workers and consumers	97	46.2
6	Correspondence courses for credit leading to degree or diploma licensure, certification and credit	94	44.8
7	Workshops which are followed up with actual experience	86	41.0
7	Transferability of credits among colleges, university and hospitals which offer health career education	86	41.0
9	Standardize curriculum requirements in all allied health programs	82	39.0
10	Core curriculum which allows movement from one career goal to another in early training	81	38.6
10	Establish a comprehensive paramedical training program at the Merrimack Valley Branch of UNH closely affiliated with the health facilities and agencies in the Greater Manchester area	81	38.6
12	Modular programming and individualized instruction in all health training areas	80	38.1
13	Closer coordination and planning between health agencies and N. H. Voc Tech. Schools	79	37.6
14	Board dealing with qualification and education necessary for all positions in the health field in New Hampshire	78	37.1
15	Coordination among various organizations, associations and agencies which offer continuing education	76	36.2
16	Speakers' bureau of state health agencies to work with students in health care education	75	35.7
17	Phasing out of diploma schools of nursing	74	35.2
17	Health care training and instruction which brings together doctors, nurses, and allied health students early in their schooling	74	35.2
19	Simulated clinical labs established in education institutions to alleviate burdened hospital personnel	73	34.8

*Ibid., p.29.

That certification/licensure agencies determine whether the academic preparation of allied health occupations satisfies the functional needs of students and the allied health profession.

That the use of inverted curriculum be investigated by the Department of Education in concert with the University of New Hampshire.*

The primary difficulty in organizing career "ladders", not only in the health field but in others, is the contrasting approaches to training between the lower level one-or two-year programs and the longer degree programs. The emphasis in the shorter programs is on performance of routine tasks, prescribed by others, with a minimum of attention to understanding the theory behind them. The longer programs start with study of theory and end with practicing the skills. Those who conduct the longer programs find it difficult to believe that acquiring skills without understanding has an important place in their process. Some of the programs for training laboratory workers are arranged so that the student who completes the one-year certificate course for clinical laboratory assistants may move on without loss of time to the associate degree program for medical laboratory technicians. Articulating in a similar manner the licensed practical nursing program at the Berlin Vocational-Technical College with the Associate degree nursing program at the Technical Institute in Concord is being studied.

There has been some activity in developing examinations to determine if one who is practicing at one level has through experience or informal study acquired the knowledge required for licensure at the next highest level. An example of this is the examination for medical technology developed by the College Level Examination Program of the College Entrance Examination Board.

Continuing Education

The concern over the insufficiency of continuing education in the health field raises the question of how well the state is meeting the need in other fields. All colleges in the state have at least a few part-time students. Altogether, as will be seen from Table 8, the total in the fall of 1972 was 6,021. Most of the courses are given on the home campus, but a few are in outlying locations.

*A Continuum in Health Occupations Education, New Hampshire Health Careers Council, Concord, N. H., 1971, p.1. (out of print)

Table 8

HEAD COUNT OF PART-TIME STUDENTS
IN NEW HAMPSHIRE COLLEGES*
Fall of 1972

Senior Colleges	Men	Women	Total
Keene State College	205	199	404
Merrimack Valley Branch, U.N.H.	618	600	1218
Mount St. Mary College	0	57	57
New England College	30	23	53
New Hampshire College	178	69	247
Notre Dame College	31	68	99
Plymouth College	146	151	297
Rivier College	231	313	544
St. Anselm's College	229	48	277
University of N. H., Durham	1008	917	1925
Others	43	70	113
Sub-Total	2719	2515	5234
Junior Colleges			
Concord College	34	6	40
New Hampshire Technical Institute	37	118	155
Vocational-Technical Colleges	419	143	562
Others	13	17	30
Sub-Total	503	284	787
Grand Total	3222	2799	6021

Source: HEGIS Reports.

*Monadnock and Lebanon "Community Colleges" not included.

This is a substantial increase over the approximately 3,600 enrolled in extension courses in the spring of 1969-70, when half of them responded in a questionnaire study.*

These part-time students are enrolled in a wide variety of courses ranging from those carrying no degree credit to those at the graduate level. Some are enrolled in courses offered for full-time students, but most are in courses, and often programs, arranged for those continuing their education while employed. Degrees, or in some cases certificates, are awarded upon completion of requirements. In the 1970 study nine-tenths of the students indicated that they were studying to improve their vocational competence.

It will be seen from Table 8 that three-quarters of the part-time students are enrolled in the University System, the bulk of them at Durham and the Merrimack Valley Branch. In the fall of 1972 the University System established a School of Continuing Studies. At the time, a memorandum to the University trustees, said:

"The UNH System possesses, through its institutions, many resources that can be used to meet the educational needs of people throughout New Hampshire. If these resources are to have the greatest impact at least cost, a more efficient and effective approach to off-campus education is essential. In addition, there are other resources in the state, particularly in the private colleges, the vocational technical colleges and among other citizens, that can be further drawn upon in implementing educational programs.

"The School of Continuing Studies can be the Systems structure that will provide improved approaches to off-campus education. The title, School of Continuing Studies, is appropriate since it implies work with and through local communities and also reflects the continuing educational and degree granting nature of the effort....

"In addition to degree programs, the School of Continuing Studies will offer a wide range of courses carrying credit aimed at meeting educational needs of people in communities throughout the state....

"Offerings of the School will not be limited to credit courses, however, but will include a wide variety of non-credit conference, workshop and institute programs. These non-credit offerings may either be directed toward career development or reflect personal and leisure-time interests, and most will be short term."

*About Higher Education in New Hampshire, pp. 30-31.

Students taking courses organized by the School may arrange to transfer the credit to colleges at which they are working toward a degree. The School itself will grant two degrees: Associate in Arts in General Studies and Bachelor of Science in General Studies. One aim is to make the offerings available to people "where they reside."

"Instructional input will not be limited to faculty of the System since faculty members from other colleges and, if they are qualified, persons in the communities of the state will be encouraged to accept teaching assignments." There is to be a state-wide lay planning council. There will be two regional offices of the School. A close linkage is planned with the University Cooperative Extensive Service. During the spring semester of 1972-73, twenty-two credit and four non-credit courses were announced for nine communities.

Chapter III

FUTURE ENROLLMENT

The Changing Trend

During the 1960's college enrollments in the nation grew dramatically. New Hampshire shared in this. Suddenly the picture changed. Undergraduate enrollment in the nation was the same in 1972 as in 1971, and total enrollment, including graduate and extension students, went up only 2 per cent. The picture in New England was a little better, with an overall gain of 3.16 per cent.* New Hampshire lagged behind the rest of the region, however, having a 0.2 per cent loss# compared with a gain of about 12 per cent each year in the prior decade.** Enrollments in New Hampshire colleges for 1971 compared with those for 1972 are given in Table 9.

The reasons for this leveling out of college enrollment are not clear, but it is obvious that it calls for reassessment of planning for higher education. Based on recent experience, colleges have become accustomed to projecting future enrollments on a climbing straight line. If instead the line is becoming level, plans for physical facilities and finances must be adjusted to fit.

The enrollment picture of our colleges is slightly complicated by the tendency for many students in this period to interrupt their formal education by postponing entry into college for a year or more or by interrupting their time in college for a period of non-academic experience. Even if this pattern of education increases, however, the enrollment projections should not be affected, since the number of returning students should balance those "stopping out".

* New England Board of Higher Education, Student Enrollment in New England Institutions of Higher Education, Fall 1972, Wellesley, Mass. 1973, pp. 6, 9, 38.

The New Hampshire figures are based on annual reports of the Coordinating Board of Advanced Education and Accreditation, which differ slightly from those gathered by the New England Board of Higher Education, and do not include any new institutions.

**About Higher Education in New Hampshire, p.35.

Table 9

COMPARISON OF ENROLLMENTS IN NEW HAMPSHIRE COLLEGES, FALL OF 1971 AND 1972

College	Enrollments		Percent Change
	1971	1972	
Private Senior			
Belknap	444	401	- 9.7
Canaan	92	82	- 10.9
Colby-New Hampshire	673	537	- 20.2
Franconia	369	439	+ 19.0
Nathaniel Hawthorne	716	762	+ 6.4
Mount St. Mary	247	286	+ 15.8
New England College	1,190	1,510*	+ 26.9*
New Hampshire College	1,407	1,246	- 20.2
Notre Dame	439	412	- 6.2
Franklin Pierce	1,077	880	- 18.3
Rivier	825	940	+ 13.9
St. Anselm's	1,674	1,585	- 4.4
Sub-Total	9,152	9,080	- 0.8
Dartmouth	3,983	3,995	+ 0.3
University System			
Keene	2,837	2,605	- 8.2
Plymouth	2,637	2,637	0.0
University of New Hampshire	10,527	10,879	+ 3.3
Sub-Total	16,001	16,121	+ 0.7
Private Junior			
Castle	65	103	+ 58.5
New England Aero. Inst.	411	385	- 6.3
White Pines	96	60	- 37.5
Sub-Total	572	548	- 4.2
Proprietary Junior			
Concord	219	165	- 24.7
Hesser	97	105	+ 8.2
McIntosh	122	94	- 2.3
Sub-Total	438	364	- 16.8
Voc-Tech. State			
N. H. Tech. Institute	460	405	- 12.0
Voc-Tech., Berlin	227	235	+ 3.5
Voc-Tech., Claremont	175	202	+ 15.4
Voc-Tech., Laconia	196	212	+ 8.2
Voc-Tech., Manchester	243	220	- 9.5
Voc-Tech., Nashua	209	209	0.0
Voc-Tech., Portsmouth	180	174	- 3.3
Sub-Total	1,690	1,657	- 1.9
Grand Total	31,837	31,765	- 0.2

*Enrollment in 1972 included 200 at the New England College branch at Arundel, England.

Source: Annual Enrollment reports compiled from HEGIS by the Coordinating Board (Reports 71-1 and 73-1). For all institutions except the vocational-technical group, total head counts are used. For the vocational-technical group only full-time enrollments are counted because inconsistency in reporting part-time students makes comparisons including them misleading.

The reason for the change in college enrollment is not a reduction in the number of high school graduates, the major source of college freshmen. The number of New Hampshire high school graduates was on a plateau from 1965 to 1968, but then it started to rise again. The relationship of grade twelve enrollment to in-state applications to the University System and to first-time students in the vocational-technical institutions is shown in Figure 3. Owen Durgin foresees that grade twelve enrollment will continue to increase until 1976-77, when it will hold steady until dipping in 1982-83.* Durgin worked with the combined enrollments of public and parochial schools, and so his figures differ somewhat from those of the State Department of Education reporting only public school enrollments. The transfer of parochial school pupils to public schools, due to the closing of some parochial institutions, introduces a factor inflating the growth of public school enrollment that is not a true reflection of the increase in the total number of school pupils in the state. Durgin worked with twelfth grade enrollment rather than the number of high school graduates, but as the two figures have an absolute relationship the trends are not affected.

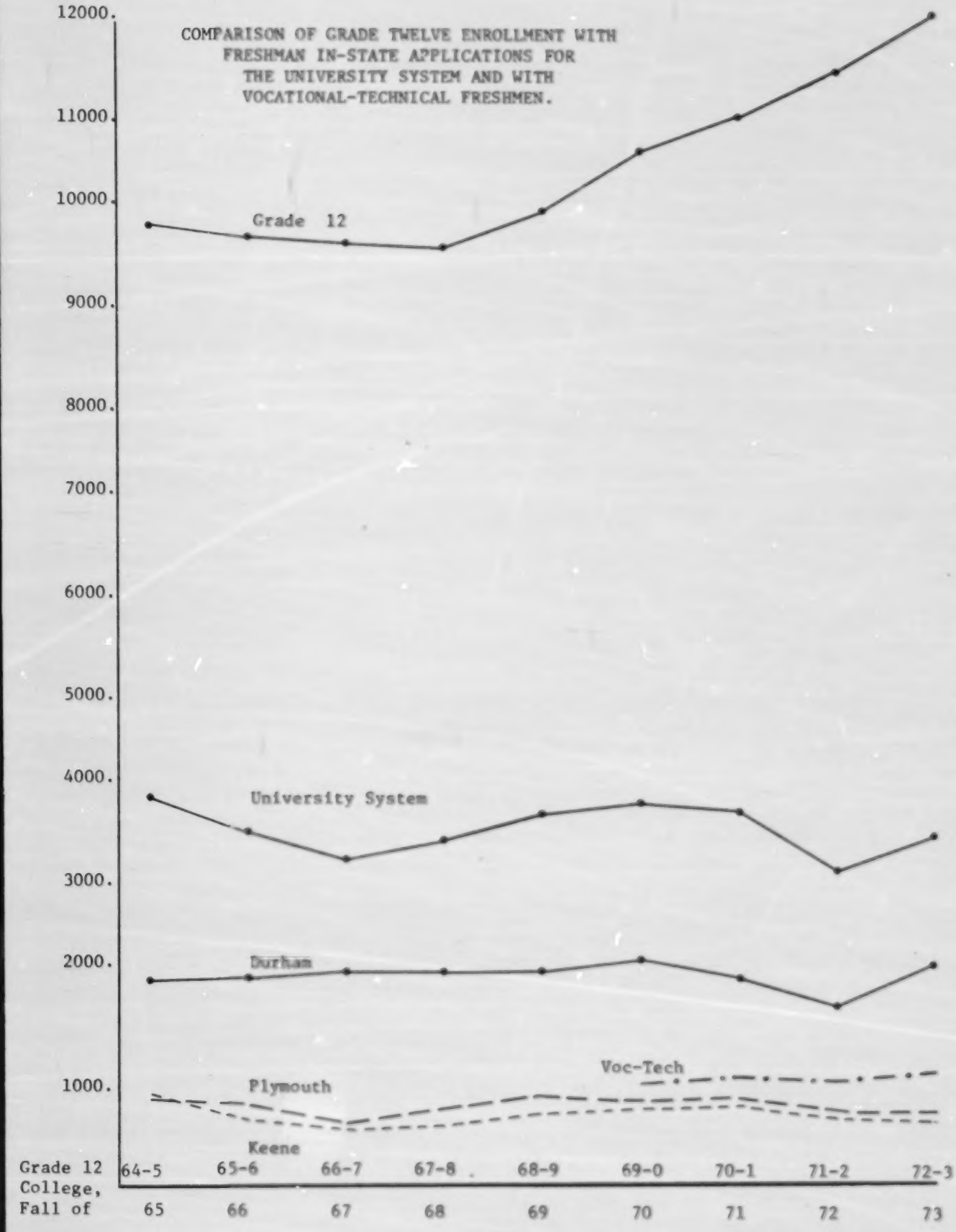
Projections for Public Institutions

Projections in this report are for completed applications for admission rather than enrollments for, to quote Durgin: "Because it was felt that in-state applications might be more indicative of demand for admission rather than enrollments, an analysis was conducted of these. It turns out that evaluation of one set of data is the equivalent of the other since admissions and enrollments are absolutely colinear. In view of the fact that future enrollments may reflect some policy changes not immediately evident the remainder of the analysis was conducted on applications." Actually, some associate degree programs are being instituted in the University System which should result in opening opportunities for students not previously admitted. There is no experience on which to judge what effect these new policies will have, but if they have any at all it will be in the direction of increasing enrollment. Another policy change that should increase enrollment in the University System is the reduction of the in-state tuition.#

*Owen Durgin, Post Secondary Education Projections, a study prepared for Sackett and Associates, June, 1973. The study detailing the statistical procedures is available from the Postsecondary Education Commission.

#For a discussion of college enrollment of New Hampshire youth compared with that of other states see: About Higher Education in New Hampshire, Concord, N. H., Coordinating Board of Advanced Education and Accreditation, 1971, pp. 9-10.

Figure 3


COMPARISON OF GRADE TWELVE ENROLLMENT WITH
FRESHMAN IN-STATE APPLICATIONS FOR
THE UNIVERSITY SYSTEM AND WITH
VOCATIONAL-TECHNICAL FRESHMEN.
12000.
11000.
10000.
9000.
8000.
7000.
6000.
5000.
4000.
3000.
2000.
1000.
Grade 12
University System
Durham
Voc-Tech
Plymouth
Keene
Grade 12
64-5
65-6
66-7
67-8
68-9
69-0
70-1
71-2
72-3
College,
Fall of
65
66
67
68
69
70
71
72
73

Durgin predicts that until 1982 applications from in-state students to the University System will be around an annual average rate of 3,677 with variations from 3,117 to 4,237. See Figure 4. This would lead to maintenance of in-state enrollments at about their present level, subject to changes in policy as mentioned above. Policy decisions also could affect the relative enrollments on the several campuses. In fact the University trustees already have tentatively decided to try to hold the enrollment at Durham at about its present level, with the possibility of absorbing any substantial increase at the Merrimack Valley Branch, Keene and Plymouth.

No attempt has been made to estimate the future of out-of-state enrollments in the University System. These presumably will be determined by policy rather than demand, at least on the Durham campus. For decades at Durham the number of out-of-state applicants has far exceeded the number the University has been able to accept. In spite of the falling off in the number of new students entering college nation-wide and the high tuition, in the range of that of many private colleges, in the past two years the out-of-state applications have continued to be five or six times as numerous as the enrollments. Most of these applicants would have met in-state admission requirements.

Historically in-state applications to other New Hampshire senior colleges have been about 20 per cent of those to the University System. On this basis, Durgin predicts the total in-state applications to New Hampshire senior colleges to vary from 3,740 to 5,084 as shown in Figure 4. This relationship between applications to the private and to the public colleges could be upset by policy changes. For example, a shift to the private colleges would be expected to result if the policy of subsidizing students for the difference between tuition at the University of New Hampshire and at the private college attended, which has been rejected in the latest two legislative sessions, were adopted. (See below, pp 67-73). It would not be expected to change the state total of applications predicted in Figure 4.

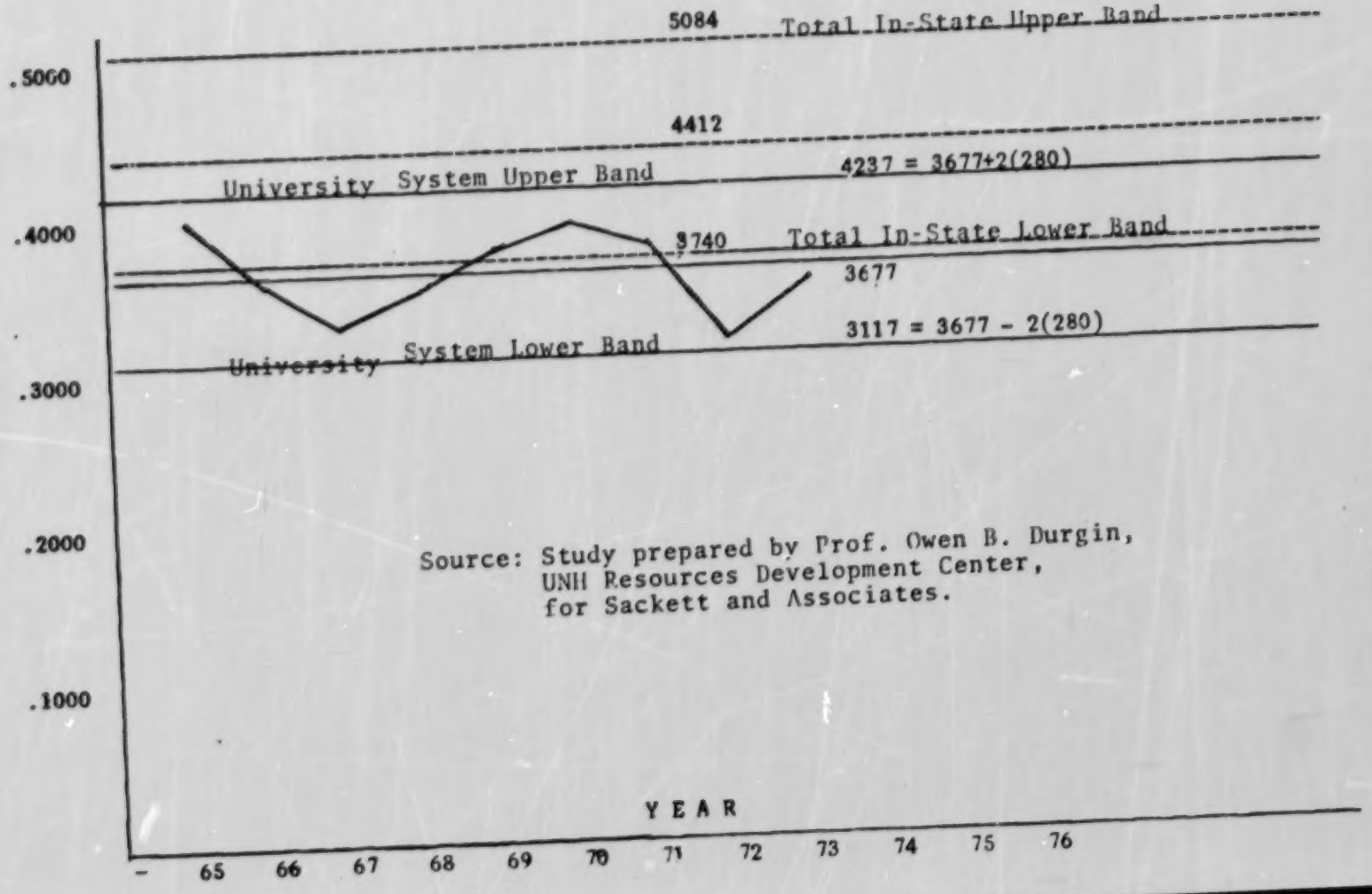
Durgin was prevented from applying the techniques used for the University System to the vocational-technical group because application data were not available and the last of these colleges (Nashua) did not open until 1970. Figure 3 indicates that the vocational-technical enrollment is not keeping pace with the growth in grade 12. Modification of admission policies are not likely to increase enrollment in the Vocational-Technical group, because, except for the Technical Institute, they already operate on an open-door policy. The policy possibility most likely to increase enrollment would be the addition of attractive new programs, or in a few cases, to increase the capacity of some programs to meet fully the demand. The effect of new programs was seen with the

Figure 4

FRESHMAN IN-STATE APPLICATIONS TO UNIVERSITY SYSTEM, 1965-1973,

AND 95 PER CENT CONFIDENCE BAND PROJECTION

Dotted Lines Are Estimate of In-State Freshman
Applications to Private New Hampshire Colleges
Plus Those to University System.



Source: Study prepared by Prof. Owen B. Durgin,
UNH Resources Development Center,
for Sackett and Associates.

introduction of the paramedical courses at the Technical Institute, at which time the enrollment went up 17 per cent. The increase would have been still more had the facilities been sufficient to accommodate all qualified applicants.

Prospects for Private Institutions

Statistically what seems to be ahead for the private institutions? Frank Van Pattee attempted to apply to them the procedures he and William R. Hosek had used in a University of New Hampshire study.* This proved to be impossible because the institutions were unable to furnish the necessary historical data. He did work out a projection for the total enrollment in eight private, non-church-related, colleges based on population trends in the states furnishing the bulk of the students in these colleges. (See Appendix C). On the basis of the following assumptions, he arrived at the projections in Table 10:

1. Interstate migration patterns will not change significantly.

2. There will be no significant change in the proportion of 17-20 year olds going to private, independent colleges.

3. There will be no change in the relative capacity or "competition" for students between states.

4. There will be no net change in the New Hampshire colleges' attempts to attract students.

5. The relative price (tuition) cost structure will remain constant.

There were no data on which to make any meaningful estimate of how the eight colleges in the group may divide up this projected pool of students. Assuming that the attractiveness of their programs and their charges retain their present relationships, presumably their relative enrollments will not change much. This would result in an approximate growth between 1972 and 1980 of about 13 per cent each. Even this modest growth rests on the five assumptions given above. Unless a college makes some significant change in its operation, there are no grounds on which it should foresee a surge in its enrollment. In about ten years a general decrease in college enrollments seems inevitable.

*William R. Hosek and Frank V. Pattee, The Demand for Education at the University of New Hampshire, Durham, N. H., Center for Industrial and Institutional Development, U.N.H., 1972.

Table 10

FULL-TIME EQUIVALENT UNDERGRADUATE ENROLLMENT PROJECTION
EIGHT NEW HAMPSHIRE PRIVATE COLLEGES*

State of Origin	Number of Students Per Year												
	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
New Hampshire	1312	1335	1360	1360	1375	1395	1415	1435	1425	1410	1375	1325	1250
Connecticut	750	760	775	775	785	795	810	820	815	805	785	760	715
Maine	210	213	217	217	219	222	225	230	227	225	220	210	200
Massachusetts	1565	1595	1625	1625	1640	1663	1690	1715	1700	1680	1640	1580	1500
New Jersey	1085	1105	1125	1125	1140	1155	1170	1190	1190	1165	1135	1100	1040
New York	2060	2100	2135	2135	2160	2190	2220	2255	2235	2210	2160	2080	1970
Pennsylvania	405	412	420	420	425	430	437	443	440	435	425	410	385
Vermont	125	125	130	130	130	132	135	135	135	133	130	125	120
Rhode Island	145	150	153	153	153	155	160	160	160	158	155	150	140
Other	1990	2025	2060	2060	2085	2115	2145	2175	2160	2135	2080	2010	1900
Total Enrollment	9647	9820	10000	10000	10112	10252	10407	10558	10487	10356	10105	9750	9220

*Belknap, Colby-New Hampshire, Dartmouth, Franconia, Nathaniel Hawthorne, New England, New Hampshire, Franklin Pierce.

It is unrealistic to expect that the private colleges of New Hampshire will maintain their enrollments relative to each other. Some will lose, others may gain. The one-year differences in their enrollments between 1971 and 1972 (Table 9) represent too short a time to indicate probable long-term trends among them, but they do indicate a tendency to move diversely.

No estimate was made for the four church-related colleges, but except that they have a larger proportion of in-state students their situation is little different from that of the other private colleges. This may well apply, also, to the two private general junior colleges. They have a special problem, however, in competition from the rapidly growing public community colleges in the neighboring states from which they draw many of their students. The enrollment in New England between 1971 and 1972 increased in the public two-year colleges by 9.5 per cent while that in the private two-year colleges dropped 1.6 per cent.*

The two long-established proprietary business colleges (Hesser and McIntosh) in contrast with the other postsecondary institutions suffered a 34 per cent drop in enrollment between 1959 and 1970.# These institutions, competing with expanded commercial programs in both the high schools and the Vocational-Technical Colleges, do not appear to have a promising future. Pierce College for Women closed in 1972. In the fall of 1973 Concord College plans to close its plant at the Manchester Airport and move in with Hesser College, which is under the same ownership.

Factors Affecting College Attendance

If the factors which are causing a smaller proportion of high school graduates in New Hampshire to go on to college could be identified, it might be possible, first, to make more accurate predictions of future enrollment or, second, to change some of these factors and hence reverse the trend. Economic considerations appear to be one factor. Hosek and Pattee found, for the University of New Hampshire, Durham: "The number of applications varied inversely with the tuition charged at the other New England state universities, income, and the population. All other things held constant, a 10 per cent increase in the Durham tuition will

*Student Enrollment in New England Institutions of Higher Education, p. 7.

#About Higher Education in New Hampshire, p. 35.

reduce the applications to the Durham campus by 6 per cent. A 10 per cent increase in the tuition charged by the other state universities will increase the applications to the Durham campus by 8.1 per cent. A 10 per cent increase in per capita income in the state will increase the applications by 8.4 per cent and a 10 per cent increase in the relevant age population will increase the applications by 7.9 per cent. This overall result however hides the differences between male and female applicants. Separate equations for males and females indicated that the differences are significant in the direction expected. For example, a 10 per cent increase in the Durham tuition will result in an 8.5 per cent reduction in female applications and 4.5 per cent reduction in male applications. A 10 per cent increase in per capita income will result in a 13.4 per cent increase in female applications and a 6 per cent increase in male applications. These results do indicate that females are more sensitive to financial changes than males, consistent with the previous arguments.

"The equations should be useful for forecasting since the fit to the data was good. For males the equation explained 82 per cent of the variation in the number of applicants and for the females the equation explained 92 per cent of the variation in the number of applicants.*" As noted above, Pattee attempted to develop a similar equation for the other campuses in the state, but unavailability of past applications data limited him to working with population figures.

In an attempt to find out if New Hampshire high school counselors had identified trends in the plans high school seniors were making for their activities following graduation, nine experienced counselors participated in a seminar at Durham in April 1973. The consensus was that there was little change in the interests of males in pursuing associate degree programs but that there was slightly more interest among females in clerical programs and definitely more interest in paramedical programs. Both sexes showed little change in planning for baccalaureate programs in arts and sciences but were much less interested in teacher preparation, somewhat less interested in engineering and somewhat more interested in business. Both sexes exhibited a trend toward delaying plans for entering college.

Opinions of the counselors on the influence of economic factors on college plans were in line with the findings of Hosek and Pattee. Interest in vocationally oriented associate degree programs varied inversely with the availability of jobs upon high school graduation. Ready availability of work at high school graduation also lessened interest in enrolling in baccalaureate programs. Good prospects of employment upon graduation from college increased interest in attending college, with the reverse being true when college graduates were having difficulty finding suitable work.

*Hosek and Pattee, 8-page abstract, pp. 6-7.

A positive relationship between family income and college attendance was confirmed by a study of how New Hampshire students finance their college education made in 1972 by the Resources Development Center of the University of New Hampshire, directed by Owen Durgin. He found in his sample of college students, "severe underrepresentation of the lowest income group and equally heavy overrepresentation of the highest income group" compared with the statewide distribution of family incomes.* His data also showed that: "Those devices designed to enhance the prospect of the student from the family having fewer financial resources are not operating in a very effective manner. The single exception is scholarships from the institution itself and then the relationship is not too strong.#

The relationship between income and college attendance may be due to family educational expectations as well as to financial resources, for Durgin's data confirmed that the family income tended to rise with the level of education of the head of the family.** The financial strain on a family of sending a child to college is great for families in the lower income range. Families with incomes between $6,000 and $7,500 were spending 34 per cent of their incomes on college expenses. That is a real sacrifice. Families with incomes over $18,000 spent only 12 per cent of their incomes on a child's education, not a serious matter except for those with large families.##

Durgin's interviewers asked the parents to state the principal reason for selecting the college attended by their children. The reasons were classified in four categories: financial, near home, desired course, only place accepted.*** The percentages citing each reason are shown in Table 11.

These findings relate primarily to the reasons for choices between colleges, but the weight given nearness to home indicates that this must be a factor in some cases for deciding whether to attend college at all or not. Willingham in his study, Free Access Higher Education, used

*Owen B. Durgin, How New Hampshire College Students Pay College Expenses, Concord, N. H., Coordinating Board of Advanced Education and Accreditation, 1972, p. 6.

#Ibid, p. 14.

**Ibid, p. 9

##Ibid, p. 2

***Ibid, pp. 22-24

Table 11

REASONS PARENTS GAVE FOR CHOICE OF COLLEGE

Type of College	Finance	Near Home	Desired Course	Only Place Accepted
University of N. H., Durham	36%	53%	38%	2%
Keene and Plymouth Colleges	21	52	45	7
Small Private Colleges	17	68	30	1
Private Junior Colleges	25	50	31	19
Vocational-Technical	19	47	54	4
All Types of Colleges	28	54	41	4
Income Class				
Less than $6000	43	55	32	2
$6000-7499	28	47	50	0
$7500-8999	18	53	53	2
$9000-11999	28	58	39	3
$12000-14999	26	51	41	5
$15000-17999	37	40	47	0
Over $18000	23	59	31	7
All Classes	28	54	41	3

Source: Durgin study. Except for the University system the sample was small. The small private colleges sampled were New England College, New Hampshire College, Notre Dame College, and St. Anselm's College. The percentages do not add up to 100 per cent because some parents cited more than one reason.

having a college within commuting distance as one measure of accessibility.*

Another factor in a growing spread between the number graduating from high school and the number entering college may be that with an increasing proportion of the population remaining in high school to graduate a larger proportion with limited academic potential and incentive are obtaining high school diplomas. At the beginning of the century high schools were essentially college preparatory institutions, so that continuation into college was a natural progression. Today a generous fraction of those in high school are not taking college-preparatory programs. That a student has taken a vocationally oriented high school program does not bar him from admission to many colleges, but it does indicate lack of college attendance as a goal. This theory may be weakened by the fact that colleges, too, have changed. Many, especially the community colleges which nation-wide recently have grown so, offer vocationally oriented programs requiring modest intellectual effort.

Does the state have an obligation to make available to everyone a college education? There always have been those, in the state and in the nation, who would reply in the negative. One of these, Professor Blanche D. Blank of Hunter College, New York, asked the question recently, "Degrees: Who Needs Them?"# Her thesis was that colleges already are turning out more graduates than there are professional and technical jobs and that, anyway, colleges give little training in the skills needed for most of these jobs. Yet unquestionably most students enter college with a major objective of improving their employment possibilities. She questions the ethics of encouraging students in this objective. She grants, and bemoans, the fact that a college degree is under present practice a prerequisite for a multitude of jobs, even though the degree requirements in many cases have no direct relevance to the employment.**

A report of the Carnegie Commission on Higher Education has a more optimistic outlook.## It holds that institutions and governments should not restrict college enrollments but instead should give high priority to adjusting their programs in line with changes in the labor

*Warren W. Willingham, Free Access Higher Education, Princeton, N. J., College Entrance Examination Board, 1970.

#Blanche D. Blank, "Degrees: Who Needs Them?" in AAUP Bulletin, Vol. 58, No. 3, Autumn 1972, pp. 261-66.

**In this connection it was interesting to note that although no college cites enhancement of female pulchritude as an objective, all 1973 Miss America contestants were college students or graduates.

##Carnegie Commission on Higher Education, Graduates and Jobs: Adjusting to a New Labor Market Situation, New York, McGraw-Hill, 1973, digested in "Chronicle of Higher Education," April 7, 1973, p.6.

market. One suggestion is a lessening of emphasis on teacher preparation and an increase in the health field. It is recommended that no new programs for the Ph.D. be started and commends the regional coordination at this level of the New England Board of Higher Education. Provision of flexible career ladders in professional fields is advocated.

The flow of college graduates does not always fit smoothly into the job market. Four years ago too few teachers were being produced. Now the production is far ahead of the demand. These cycles occur in all disciplines, and will persist as long as freedom of choice remains for the student, the colleges and the employers. Adequate planning and vocational counseling can be a factor in smoothing out the hills and valleys, but their effectiveness is limited unless accompanied by coercion.

Colleges like to believe that they give their students something beyond preparation for a specific occupation. The objective of many college courses is to contribute to a fuller personal life, to a more responsible citizenship. Even in the vocationally oriented departments there is today an emphasis on breadth of training to enable a graduate to adapt more readily to shifting employment opportunities.

Should the policy be adopted of reducing the number of college students to bring it more in line with the need for their advanced training, who is going to determine which lucky individuals will be in the chosen group? Will the selection be made at the end of the primary grades, the middle school, the high school? What weight will be given academic promise, personality, the social and economic status of the parents? In a haphazard manner selection now takes place at these levels and on these bases, but doors are not closed.

The stagnate four-year college enrollment situation shown by the statistical studies appears to be, at least in part, a voluntary adaptation to the cloudy employment outlook for college graduates. If failure to continue education after high school graduation were irrevocable, the decision could be a regrettable one for many individuals. However, expansion of continuing education keeps the door open to future advancement, both vocationally and culturally. This is a state responsibility.

Chapter IV

PHYSICAL FACILITIES

Present Space in New Hampshire Colleges

The physical facilities available on the campuses are reported periodically as part of HEGIS, the latest such report being in the fall of 1971. For the present study, in the fall of 1972 New Hampshire colleges were asked to report changes from the 1971 report expected to be in service by the fall of 1973. These up-dated reports are used in this discussion.

The method of measuring and classifying space should be uniform for all colleges since they were guided in their reporting by a detailed 102-page manual.* Even with such guidance, however, there are chances for misinterpretation and human error. Space is reported in terms of net assignable square feet. Rooms are classified as follows:

Classrooms
Laboratories
Offices
Study: library and other study rooms
Special Use: athletic, audio-visual, demonstration, field service, etc.
General Use: assembly, exhibition, food, health, lounge, merchandising, recreation, etc.
Supporting: computer facilities, shop, storage, etc.
Medical Care: hospitals, clinics, etc. (combined with special use in this report)
Residential: includes food service in dormitories

The square feet of space per full-time equivalent student in New Hampshire Colleges in the several categories is given in Table 12.

* U. S. Department of Health Education and Welfare, Higher Education Facilities Classification and Inventory Procedures Manual, Washington, D. C., Supt. of Documents Catalog No. FS 5.251:51016, Govt. Printing Office, 1968.

Table 12

SPACE PER STUDENT 1973
NEW HAMPSHIRE COLLEGES

College	FTE Students	Assignable Square Feet Per Student							
		Tot.Non-Res.*	Classrooms	Labs.	Office	Study	Spec.Use	Gen.Use	Support.
Private 4-Year									
Belknap	396	147	30	15	13	6	17	29	33
Colby	530	192	37	14	23	15	23	69	9
Franconia	426	173	9	38	21	20	4	41	40
Nathaniel Hawthorne	757	169	16	9	12	34	23	74	2
Mt. St. Mary	244	364	42	36	47	82	0	110	47
New England	1276	119	17	28	14	12	6	34	8
New Hampshire	942	69	9	1	7	6	13	23	9
Notre Dame	346	180	26	34	16	8	4	90	0
Franklin Pierce	865	158	23	14	17	24	19	35	27
Rivier	577	167	19	28	19	19	4	63	13
St. Anselm's	1568	100	20	20	19	11	9	18	2
Priv. Univ.-Dartmouth	3969	317	21	47	54	45	55	47	48
Private 2-Year									
New Eng. Aero. Inst.	381	88	33	8	10	8	0	27	1
White Pines	56	226	36	18	36	43	0	79	15
Proprietary 2-Year									
Concord	138	70	38	3	14	5	0	6	5
Hesser	103	63	30	11	6	4	0	10	2
McIntosh	91	131	59	16	11	17	0	28	0
Public Univ. System									
Keene	2336	116	16	18	14	17	20	24	7
Plymouth	2439	150	13	11	19	18	34	41	13
U.N.H.	9640	155	15	34	30	15	27	23	12
Voc-Tech.									
N. H. Tech.-Concord	457	158	29	49	18	14	5	35	7
V-T, Berlin	236	156	17	80	5	31	1	20	3
V-T, Claremont	279	112	18	57	12	5	0	17	3
V-T, Laconia	216	153	23	93	12	10	0	14	1
V-T, Manchester	220	294	26	143	14	8	4	92	7
V-T, Nashua	211	166	28	76	18	14	2	16	12
V-T, Portsmouth	279	141	9	98	6	5	0	19	4

*Differences between this column and sum of the seven which follow it are due to rounding of figures.
Source: Enrollment - 1972 HEGIS; Space - 1971 HEGIS up-dated by questionnaire fall 1972.

Comparison with U. S. Practice

A national study of the HEGIS space inventory reports for 1971 shows the assignable square feet per full-time equivalent student in various types of colleges of varying enrollments.*

Table 13 shows the national variations of space per student for total non-residential areas and for classrooms for the classifications of colleges found in New Hampshire. The U.S. median figures show average present practice; they are not a theoretical ideal. There is no reason why students in a private four-year college enrolling under 500 should have 35 square feet of classroom space each compared with 21 square feet for four-year private colleges enrolling from 1000 to 2499. This difference is due primarily to more efficient utilization possible with larger enrollments.

Not only are there wide variations between the median facilities in colleges of different classifications, there are even wider differences between the lower and upper quartiles within each classification, as illustrated in Table 13.

To determine how adequately New Hampshire colleges house their academic activities, their enrollments were compared with the number of students each would accommodate using the U.S. median area per student as a comparison. This comparison has its drawbacks as it makes no adjustment for variations in the programs offered by the different colleges, and this is a factor affecting the adequacy of space. For example, the state Vocational-Technical colleges are compared with other public junior colleges most of which have comprehensive programs requiring less laboratory space per student than the shop-oriented programs of the New Hampshire institutions. The comparisons take no account of the quality of facilities, nor of their arrangement for efficiency in scheduling and administration. They are at best an approximation of how well equipped a college is to house its programs. The theoretical numbers of students over or under the national median are shown in Table 14.

Bearing in mind that the figures in Table 14 give a general picture only, without any adjustment for specific conditions on any campus, it appears that the four-year private colleges are not in a position to accommodate a substantial increase in enrollment without additional

*Preliminary Data, Inventory of Physical Facilities in Institutions of Higher Education, Raleigh, North Carolina, Higher Education Facilities Services, Inc., P. O. Box 2147, 1972, pp. 186-197.

Table 13

ASSIGNABLE SQUARE FEET PER FULL-TIME EQUIVALENT STUDENT, U.S. PRACTICE 1971, FOR SELECTED AREAS AND CLASSIFICATIONS OF COLLEGES

Classification of College	Square Feet Per Student					
	All Non-Residential Space			Classrooms		
	Q1	Mdn	Q3	Q1	Mdn	Q3
Public						
Universities, 5000-9999	93	131	160	9	11	15
4-Year Colleges, 1000-2499	88	136	168	14	18	24
2-Year Colleges, under 500	74	116	195	15	23	40
Private						
Universities, 2500-4999	120	209	255	15	19	23
4-Year Colleges, under 500	151	250	443	23	35	68
4-Year Colleges, 500-999	126	179	226	18	26	33
4-Year Colleges, 1000-2499	115	157	197	16	21	26
2-Year Colleges, under 500	126	208	367	23	35	63
2-Year Colleges, 500-999	49	111	170	16	22	27

Table 14

NEW HAMPSHIRE COLLEGE PHYSICAL FACILITIES COMPARED WITH
U.S. MEDIAN PRACTICE IN TERMS OF F.T.E. STUDENT CAPACITY

Figures are number of students over or (under)
median practice for like institutions.

Colleges	TOTAL Non-Res.	Class-rooms	Labs.	Office	Study Areas	Special Use	General Use	Supporting
Private Senior								
Belknap	164	65	92	221	323	2[illegible]	214	(220)
Colby-New Hampshire	(37)	(223)	211	15	68	(92)	(337)	75
Franconia	131	311	(380)	136	150	358	152	(386)
Nathaniel Hawthorne	43	290	476	387	(687)	(109)	(570)	649
Mt. St. Mary	(111)	(47)	(197)	(129)	(399)	244	(181)	(304)
New England	306	217	(891)	478	330	868	44	306
New Hampshire	580	615	883	658	631	323	428	169
Notre Dame	131	85	(204)	204	295	319	(114)	381
Franklin Pierce	101	81	356	268	(273)	22	150	(1235)
Rivier	42	158	(130)	122	(25)	414	(295)	(109)
St. Anselm's	561	69	112	169	494	842	730	1290
Sub-Total	1911	1621	328	2529	907	3215	221	616
Dartmouth	(2051)	(401)	100	(1249)	(7242)	(8091)	(3822)	(15630)
University System								
Keene	344	301	358	492	(774)	(102)	85	538
Plymouth	(261)	676	1178	(173)	(1028)	(1911)	(1597)	(1190)
Univ. of N. H.	(1825)	(3451)	(98)	(1708)	(2504)	(6853)	(4027)	(798)
Sub-Total	(1742)	(2474)	1438	(1389)	(4306)	(8866)	(5559)	(1430)
Private Junior								
New Eng. Aero Inst.	220	23	233	231	221	381	202	301
White Pines	(5)	(2)	7	(25)	(65)	56	(20)	11
Sub-Total	215	21	240	206	156	437	182	312
Proprietary								
Concord	92	(10)	118	63	104	138	125	99
Hesser	72	14	45	76	85	103	86	89
McIntosh	39	(63)	21	51	14	91	48	91
Sub-Total	203	(59)	184	190	203	332	259	279
State Voc-Tech.								
N. H. Tech. Institute	(163)	(99)	(212)	(198)	(161)	382	(1300)	(402)
V-T, Berlin	85	64	(320)	139	(421)	205	(286)	85
V-T, Claremont	10	64	(189)	9	142	278	(254)	74
V-T, Laconia	(68)	(2)	(380)	4	20	216	(123)	186
V-T, Manchester	(337)	(28)	(706)	(39)	56	140	(2027)	(198)
V-T, Nashua	(90)	(43)	(260)	(114)	(63)	175	(158)	(416)
V-T, Portsmouth	(60)	173	(529)	138	159	279	(320)	7
Sub-Total	(623)	129	(2596)	(61)	(268)	1675	(4468)	(664)
Grand Total	(2087)	(1163)	(306)	226	(10550)	(11298)	(13187)	(16517)

Explanation: The formula used to derive this Table was:

X College Enrollment - X College Assignable Sq. Ft. / U. S. Median Per Student = Number of students more (or fewer) than at U.S. median college with like space.

This table is read as follows: Belknap enrolled 164 more students for all its non-residential space than this U. S. median comparable college; it enrolled 65 more than the median for its classrooms; 92 more for its laboratories, etc. Colby enrolled 37 fewer for all its non-residential space than the median; 223 fewer for its classrooms, etc.

physical facilities. The exception is the smallest institution (Mount St. Mary), which because of low enrollment is unable to make efficient use of its facilities. The two-year private colleges are in better balance than the four-year ones as far as classrooms are concerned but have limited facilities in other areas. The private university is well-equipped except for tightness in laboratories.

The public institutions are better equipped generally, but the two state colleges, especially Plymouth, are crowded in classrooms and laboratories. The University's laboratories lag behind the facilities in other categories. This is serious because of the science-oriented nature of many of its programs and the demands upon its laboratories for research and for its service activities for agriculture and industry. It has already been noted that because of the heavy emphasis in the vocational-technical institutions on laboratory work, their apparent adequacy of laboratory space is misleading.

Residential Facilities

So far we have dealt with the non-residential physical facilities. The HEGIS reports include residential areas, but these reports are unsuitable for our purpose because of the greatly different need for such facilities at the various New Hampshire colleges. Some are almost completely residential, some have a substantial proportion of commuting students, others are entirely commuting. To get information on residential facilities, the New Hampshire colleges were asked to supply data on their dormitory capacities and occupancies for the fall of 1972. The results are given in Table 15.

Here the picture is the reverse of that for the other facilities. The private colleges generally have surpluses and the University System has a shortage. The reason probably is that federal funds have been more available for housing than for academic construction. Also, housing is income producing and consequently self-liquidating.

A complicating factor is the flexibility introduced by the availability of rented quarters off-campus. Some students prefer to live off-campus, even though the quarters sometimes are substandard, because of the freedom from dormitory regulations. Others take such quarters out of necessity when the dormitory space is insufficient. A third as many students, disregarding commuters, live off campus as on. As many New Hampshire colleges are in relatively small towns, the off-campus quarters are insufficient for the demand and many students find their housing some distance from the campus. Housing in Durham has been in short supply since the college moved

Table 15

RESIDENTIAL FACILITIES
NEW HAMPSHIRE COLLEGES - FALL 1972
(Commuting Colleges omitted)

Colleges	Dormitory Beds			Fraternities, Etc.			College Apartments			Commuters	Rented Private Qtrs.
	Cap.	Occ.	Over(Under) Capacity	Cap.	Occ.	Over(Under) Capacity	No.	Occ.	Over(Under) Capacity		
Private Senior											
Belknap	200	200	-	-	-	-	-	-	-	10	200
Colby	580	576	(4)	-	-	-	-	-	-	10	5
Franconia	*206	206	-	-	-	-	-	-	-	0	161
Nath. Hawthorne	450	476	26	-	-	-	-	-	-	18	296
Mt. St. Mary	240	190	(50)	-	-	-	-	-	-	35	-
New England	775	735	(40)	90	90	-	-	-	-	100	325
New Hampshire	499	469	(30)	-	-	-	-	-	-	175	189
Notre Dame	135	126	(9)	-	-	-	-	-	-	185	2
Franklin Pierce	738	671	(67)	10	10	-	26	6	(20)	16	195
Rivier	300	216	(84)	-	-	-	-	-	-	180	-
St. Anselm's	975	963	(12)	-	-	-	-	-	-	350	150
Total Pri. Senior	5098	4828	(270)	100	100	-	26	6	(20)	1079	1523
Dartmouth	2661	2723	62	352	252	(100)	132	132	-	20	734
Private Two-Year											
New Eng. Aero. Inst.	312	250	(62)	-	-	-	-	-	-	100	39
White Pines	50	50	-	-	-	-	-	-	-	10	5
Total Private Two-Yr.	362	300	(62)	-	-	-	-	-	-	110	44
Public Senior											
Keene	971	979	8	106	100	(6)	32	32	-	755	400
Plymouth	1412	1412	-	90	90	-	30	30	-	350	450
Univ. of New Hampshire	4094	4461	367	680	850	170	111	111	-	*1323	*2683
Total Public Senior	6477	6852	375	876	1040	164	173	173	-	2428	3533
Public Two-Year											
N. H. Tech. Inst.	208	200	(8)	-	-	-	-	-	-	141	82
Grand Total	14806	14903	97	1328	1392	64	331	311	(20)	3778	5916

Source: Questionnaire to colleges.

*Estimated

there in 1893; today hundreds of students find their accommodations in surrounding communities such as Newmarket, Lee, Dover, and Portsmouth. Clearly Dartmouth and the University of New Hampshire need more dormitory space in order to eliminate overcrowding, although in the case of Dartmouth full utilization of the fraternities would ease the situation.

Chapter V

FINANCES

Revenues and Expenditures of New Hampshire Colleges

Numerous studies and articles report that financial difficulties for colleges are widespread. A detailed study of the financial conditions of forty-one colleges and universities sponsored by the Carnegie Commission on Higher Education was published under the pessimistic title of The New Depression in Higher Education.* Financial statistics for New Hampshire colleges indicate that they share this nation-wide problem.

The financial information dealt with in this study has been taken from the HEGIS reports of financial statistics. The HEGIS forms are compatible with the accounting definitions in College and University Business Administration published by the American Council on Education. In spite of this attempt to secure uniformity in the reports from all institutions, there are enough variations in the reporting to indicate caution in making comparisons.#

*Earl F. Cheit, The New Depression in Higher Education, New York, A Carnegie Commission Report, McGraw-Hill, 1971.

#Because of the diversity in reporting college expenditures and because the Education Amendments of 1972 (Public Law 92-318) provide that per student costs shall be taken into account in dispensing certain federal monies, the law provided for a commission to propose a uniform accounting procedure. The commission was appointed, but did not report, before President Nixon's impoundment of higher education funds raised questions about the implementation of the law.

The National Center for Higher Education Management Systems at the Western Interstate Commission for Higher Education in Boulder, Colorado, has been for some years developing an elaborate, computerized system for reporting financial and other educational statistics. If this system, when completed, were to be adopted nation-wide, inter-institutional comparisons could be made with confidence.

Chancellor William H. Danforth of Washington University, St. Louis, wrote in "Management and Accountability in Higher Education," AAUP Bulletin, V59, No. 2, Summer 1973, pp. 135-38, that college administrators may not like or understand management systems such as that above, but the systems are here to stay and administrators had better get used to them.

The information asked for on HEGIS, except in the case of public institutions, omits some items essential for a definite picture of the fiscal condition of a college. For example, for private colleges, interest payments are not specifically asked for, and there is no request for debt data, either as loans or unpaid bills, except for that incurred for physical facilities. Since the financial reports, except for the public institutions, are considered confidential, individual private colleges will not be identified in this chapter except in Table 16. The revenues are reported individually there to show the spread in the size of the operations. Dartmouth College is not included in the group statistics since its operation is so large compared with the other private institutions in the state that its inclusion would distort the picture. The four church-related colleges are treated separately from the other private colleges in Table 16, because the value of the contributed services of their clerical faculty members (estimated to be about three-quarters of their total endowment and gifts income) is an item not present in the other private colleges. Being under the fiscal management of the state government makes the accounting procedures of the seven vocational-technical institutions different from those of the typical college. They have estimated the data requested.

Revenues and expenditures for the fiscal year 1972 are shown in Tables 16 and 17.

The trends in per student revenues and costs for selected categories from fiscal 1968 through fiscal 1972 are shown in Tables 18 and 19. To make the amounts comparable the dollar amounts for the three prior years have been converted to 1972 dollars, using the Consumer Price Index. Only major categories are included. "Educational and General" covers all costs of instruction and administration as well as those of research, public service, and sponsored programs. To come closer to a picture of the actual revenues and costs of providing instruction, without the adjunct items of research, service, and sponsored programs, these have been subtracted in column five of Table 18 and column three of Table 19.

Surpluses and Deficits

As has already been noted, the HEGIS reports do not call for certain information -- debt other than for physical plant, accounts due or payable, current assets, etc. -- essential for determination of the financial condition of a college. The private senior colleges were asked to make supplementary financial reports, but only five of the twelve replied and only two of these supplied all of the information requested. The number of replies was insufficient for drawing any group conclusions.

Table 16

COLLEGE REVENUES IN NEW HAMPSHIRE
FISCAL 1971-72
In Thousands of Dollars (000 omitted)

Colleges	Education and General							TOTAL EDUC. & GEN.	Other		TOTAL CURRENT FUNDS
	Tuition & Fees	Govt. Approp.	Endow. & Gifts	Spons. Research	Other Research	Spons. Programs	Other Sources		Student Aid Grants	Aux. Enter.	
Senior Colleges											
Private											
Belknap	794	31	154	-	-	-	6	985	64	235	1,334
Conaen	138	-	36	-	-	-	9	181	11	97	289
Colby-N. H.	1,571	-	124	-	-	-	140	1,835	100	842	2,777
Franconia	1,098	6	20	-	-	-	-	1,124	14	238	1,376
Keth. Hawthorne	1,421	-	36	-	-	-	-	1,455	68	500	2,023
New England	2,885	213	256	23	-	-	674	3,851	79	1,328	5,313*
New Hampshire	2,032	337	27	21	-	35	10	2,462	126	651	3,239
Franklin Pierce	2,238	-	37	49	-	-	60	2,384	7	1,133	3,524
Sub-Total	12,177	587	686	93	-	35	699	16,277	669	5,074	19,875
Church-Related											
Mt. St. Mary	372	10	207	-	-	-	15	604	39	300	943
Notre Dame	685	18	146	-	-	-	19	668	16	237	921
Rivier	830	-	76	-	-	13	129	1,048	29	380	1,457
St. Anselm's	2,810	-	284	-	-	260	78	3,432	286	1,132	4,848
Sub-Total	4,697	28	713	-	-	273	241	5,752	368	2,049	8,169
Priv. University											
Dartmouth	10,963	-	9,817	3,515	-	2,810	3,340	30,445	1,497	6,852	38,794
University System											
Keene	2,167	1,131	-	-	-	200	237	3,735	-	1,570	5,305
Plymouth	1,866	991	35	-	-	130	29	3,051	112	1,704	4,867
Univ. of N. H.	12,975	10,951	205	1,646	912	6,148	2,155	36,992	88	6,391	41,471
Sub-Total	17,008	13,073	240	1,646	912	6,478	2,421	61,778	200	9,665	51,643
Junior Colleges											
Private Proprietary											
Concord	267	-	-	-	-	-	-	267	-	-	267
Hesser	175	-	-	-	-	-	-	175	-	-	175
McIntosh	151	-	-	-	-	-	-	151	-	4	155
Sub-Total	593	-	-	-	-	-	-	593	-	4	597
Private											
Castle	49	-	54	-	-	-	1	104	1	-	105
New Eng. Aero.	483	-	-	-	-	9	5	497	2	296	795
White Pines	101	-	25	-	-	-	7	133	-	25	158
Sub-Total	633	-	79	-	-	9	13	734	3	321	1,058
State											
N. H. Technical	159	738	-	-	-	-	-	897	34	150	1,081
Voc-Tech., Berlin	69	376	-	-	-	-	-	445	8	-	453
Voc-Tech., Claremont	57	294	-	-	-	18	17	386	-	-	386
Voc-Tech., Laconia	48	378	-	-	-	-	4	430	-	-	430
Voc-Tech., Manch.	87	327	-	-	-	-	-	414	3	32	449
Voc-Tech., Nashua	54	319	-	-	-	3	-	376	4	-	380
Voc-Tech., Portsmouth	83	264	-	-	-	-	-	347	6	21	374
Sub-Total	557	2,696	-	-	-	21	21	3,295	55	203	3,553
Grand Total	46,628	16,384	11,535	5,256	912	9,626	6,735	96,874	2,592	24,168	123,689

*New England College reported $55,476 as income for Major Service Programs, not elsewhere included.

Source: NHCIS Reports.

Table 17

COLLEGE EXPENDITURES IN NEW HAMPSHIRE

FISCAL 1971-72

In Thousands of Dollars (000 omitted)

Colleges	Instr. & Dept. Research	Organ. Activities	Research	Other Spons. Progr.	Ext. & Pub. Serv.	Libraries	Phys. Plant Oper.	Other Educ. Exp.	TOTAL EDUC. & GEN.	Student Aid Grants	Aux. Enterprises	TOTAL CURRENT FUNDS
Senior Colleges												
Private*	7,881	505	86	290	23	903	2,724	6,690	19,102	1,355	5,900	26,397#
Univ. System	13,454	773	3,187	2,463	4,829	1,818	2,925	9,980	39,429	2,120	9,363	50,912
Junior Colleges												
Private	279	-	-	72	70	64	99	270	803	1	112	916
Proprietary	188	-	-	-	-	2	76	26	524	-	-	524
Public Voc-Tech.	1,947	16	-	21	30	90	410	714	3,230	52	200	3,482

*Dartmouth College is omitted from this Table for reasons given in the text. The church-related colleges are included with the other private senior colleges.

#Included in this total is $40,000 reported by New England College under "Other Major Service Programs".

Source: HEGIS Reports.

Table 18

TRENDS IN REVENUES (CONVERTED TO 1972 DOLLARS)
PER FULL-TIME EQUIVALENT STUDENT IN NEW HAMPSHIRE COLLEGES*

Colleges	Fiscal Year	No. of F.T.E. Students	Col. 1 EDUC. & GEN. TOTAL	Col. 2 Tuition & Fees	Col. 3 Govt. Appropri-ation	Col. 4 Research & Spons. Programs	Col. 5 APPROX. INSTR. REVENUE (Col.1-4)#	Col. 6 Aux. Enter-prises	Col. 7 Student Aid Grants
Senior Colleges									
Private	1969	6,984	$2,318	$1,811	$ 66	$ 132	$2,187	$ 824	$ 106
	1970	7,200	2,342	1,828	25	158	2,184	914	125
	1971	7,351	2,293	1,878	6	78	2,215	724	123
	1972	8,339	2,402	2,150	74	48	2,354	854	100
	4-year change	+1,335	+ 84	+ 339	+ 8	- (84)	+ 167	+ 30	- (6)
University System	1969	11,069	3,065	915	1,135	797	2,268	693	2
	1970	11,979	3,203	1,058	1,178	716	2,487	690	17
	1971	13,336	3,340	1,126	1,029	650	2,690	657	17
	1972	14,170	2,948	1,200	923	638	2,310	682	14
	4-year change	+3,101	- (117)	+ 285	- (212)	- (159)	+ 42	- (11)	+ 12
Junior Colleges									
Private	1969	299	1,219	1,048	98	0	1,219	556	66
	1970	289	1,426	1,293	23	0	1,426	825	0
	1971	495	1,268	1,206	6	0	1,268	475	2
	1972	600	1,222	1,056	0	15	1,207	533	7
	4-year change	+ 301	+ 3	+ 8	- (98)	+ 15	- (12)	- (23)	- (59)
Proprietary	1969	221	1,095	1,085	0	0	1,095	6	0
	1970	395	1,793	1,793	0	0	1,793	221	0
	1971	423	1,309	1,309	0	0	1,309	9	0
	1972	429	1,380	1,380	0	0	1,380	9	0
	4-year change	+ 208	+ 285	+ 295	-	-	+ 285	+ 3	-
Vocational-Technical	1969	711	1,604	327	1,278	0	1,604	211	45
	1970	1,563	1,227	255	930	32	1,195	146	25
	1971	1,648	1,480	317	1,557	25	1,455	131	35
	1972	1,945	1,649	286	1,386	11	1,638	104	28
	4-year change	+1,234	+ 45	- (41)	+ 108	+ 11	+ 34	- (107)	- (17)

*Dartmouth is omitted for reasons given in the text. Others omitted because they sent no report for the year shown or were not in operation that year: Hawthorne, 1969, 1970, 1971; New Hampshire College, 1970; Castle, 1969, 1970, 1971; White Pines 1969; Concord, 1969; Pierce for Women, 1969, 1971, 1972; Manchester V-T, 1969, 1970; Berlin, Claremont, Nashua V-T, 1969; Nashua V-T, 1970.

#See text for explanation.

Table 19

TRENDS IN EXPENDITURES (CONVERTED TO 1972 DOLLARS)
PER FULL-TIME EQUIVALENT STUDENT IN NEW HAMPSHIRE COLLEGES*

Colleges	Fiscal Year	No. of F.T.E. Students	Col. 1 EDUC. & GEN. TOTAL	Col. 2 Research Service Sponsored Programs	Col. 3 APPROX. COSTS OF INSTRUC. (Col.1-2)#	Col. 4 Auxiliary Enterprises	Col. 5 Student Aid Grants
Senior Colleges							
Private	1969	6,984	$2,041	$ 94	$1,948	$ 701	$ 184
	1970	6,200	2,266	129	2,137	767	171
	1971	7,351	1,934	79	1,854	708	186
	1972	8,339	2,291	48	2,243	708	163
	4-year change	+1,355	+ 250	- (46)	+ 295	+ 7	- (21)
University System	1969	11,069	2,986	903	2,083	669	123
	1970	11,979	3,068	952	2,116	692	136
	1971	13,336	2,899	854	2,045	648	142
	1972	14,170	2,783	739	2,044**	661	150
	4-year change	+3,101	- (203)	- (164)	- (39)	- (8)	+ 27
Junior Colleges							
Private	1969	299	1,684	0	1,684	1,759	75
	1970	289	1,729	0	1,729	1,796	0
	1971	495	1,271	0	1,271	488	9
	1972	600	1,389	153	1,236	186	2
	4-year change	+ 301	- (295)	+ 153	- (448)	-(1573)	- (73)
Proprietary	1969	221	861	0	861	0	0
	1970	395	1,900	0	1,900	171	0
	1971	423	1,306	0	1,306	0	0
	1972	429	1,222	0	1,222	0	0
	4-year change	+ 208	+ 361	0	+ 361	0	0
Vocational-Technical	1969	711	1,420	48	1,373	206	43
	1970	1,563	1,022	33	989	137	24
	1971	1,648	1,696	25	1,671	121	88
	1972	1,945	1,661	27	1,634	103	27
	4-year change	+1,234	+ 241	- (21)	+ 261	- (103)	- (16)

*Dartmouth is omitted for reasons given in the text. Others omitted because they sent no report for the year shown or were not in operation that year: Hawthorne, 1969, 1970, 1971; New Hampshire College 1970; Castle, 1969, 1970, 1971; White Pines, 1969; Concord, 1969; Pierce for Women, 1969, 1971, 1972; Manchester V-T, 1969, 1970; Berlin, Claremont, Nashua V-T's, 1969; Nashua V-T, 1970.

#See text for explanation.

**This figure for 1971-72 for the units of the University System was: Keene, $1,361; Plymouth, $1,148; Durham, $2,461. Keene and Plymouth were lower than any of the private colleges. The Durham figure included the costs of expensive graduate programs and some general administration for the System as a whole. It still was less than six of the twelve private colleges and much less than half that of Dartmouth, the only other college in the state with a comparable graduate program.

One suspicion was confirmed, that there is a lack of uniformity in the HEGIS reports. For example, one college included its athletic program under "Organized Activities of Educational Departments" and another included it with "Auxiliary Enterprises," a defensible difference in philosophy but confusing accounting.

Although it is impossible from the data available to draw a complete picture of the financial condition of the private colleges, an approximation can be sketched. Available data are summarized in Table 20.

As far as operations for the year are concerned, the principal uncertainty relates to the amount paid for interest. Some of the private colleges probably reported this somewhere under current funds, others probably did not. Of the two private colleges which indicated this information on the special financial inquiry sent them, one had included it under current funds and one had not. Although the major interest payments would be on the debt for physical plant, some colleges would also have such payments on unsecured loans. To avoid an overly optimistic analysis, some allowance must be made for interest payments. Assuming that for the private colleges as a group interest payments on plant debt reported under current funds would be offset by other interest payments not reported at all, unreported interest payments have been estimated to amount to three per cent on the $15,615,982 plant debt outstanding at the beginning of the year. This three per cent rate is what the colleges pay on direct federal loans or on private source loans on which the federal government pays an interest subsidy. Three-quarters of the plant debt is of this character.* The other private loans certainly bear a much higher rate. It therefore seems to be a safe assumption that the interest estimate in Table 20 is extremely conservative.**

Even without the charge for estimated interest payments, the eight private colleges as a group were in poorer financial condition at the end of fiscal 1972 than at the beginning. The church-related colleges seemed to be in better condition. When the interest estimate is subtracted, the picture is darker. The group showing on their Educational and General Funds is not bad, but five of the twelve reported a negative balance in this account. In one case the negative balance was 62 per cent of the revenue and for another it was 14 per cent.#

Only two reported negative balances in their Auxiliary Enterprises funds, with the result that the number reporting a negative balance in their total Current Funds was three. One college in the group has an endowment in excess of $2,000,000, but the other eleven between them have less than $1,000,000. They will not be able to withstand many losing years.

*About Higher Education in New Hampshire, p.61.

#One of these colleges closed in September 1973 and the other has announced it will close in December 1973.

**Based on my informal observations, it is my opinion that the annual interest obligations are at least double this amount. E.B.S.

Table 20

SUMMARY OF AVAILABLE FINANCIAL DATA FOR PRIVATE NEW HAMPSHIRE SENIOR COLLEGES, FISCAL 1972*

Items	Eight Non-Church Related	Four Church-Related	All Twelve
Net balance of educational and general funds	$ 519,772	$ 408,802	$ 928,574
Net balance of auxiliary enterprise funds	1,065,078	155,698	1,220,776
Net balance of all current funds#	1,343,850	301,086	1,644,936
New borrowing for physical plant	1,660,342	200,000	1,860,342
Paid on physical plant debt	295,203	183,832	479,635
Increase in physical plant debt	1,365,139	16,168	1,381,307
Net change in financial condition without interest payments	-(21,289)	284,918	263,629
Estimated interest on Plant Debt (@ 3%)	290,969	177,510	468,479
Net change in financial condition, including estimated interest	-(312,248)	107,408	-(204,840)

*Dartmouth College omitted.

#"All current funds" is not the sum of the two items above it because "student aid grants" are included in all current funds but not in either of the other two.

Source: HEGIS, except estimated interest payments.

Except for the two colleges with the largest proportionate deficit in their educational and general funds, one of which has now closed, the picture for the others seems not too dark as far as current operations are concerned. When the debt service charges are taken into consideration, the outlook is not so optimistic. Only one of the colleges has no debt for physical plant. The others have expanded rapidly during the past decade and as a result have heavy commitments for debt service.* Although reductions in operating costs to compensate for falling enrollment and inflation are not easily achieved, they can be made. The inflexible long-term debt commitment becomes a relatively heavier burden as income from tuition goes down.# (Inflation reduces the burden; debt is paid off in "cheaper" dollars than those borrowed.)

Tuition Increases

Tuition rates can be raised in an attempt to compensate for reduced enrollment or cost increases. Except one junior college and the state Vocational-Technical group, all of the colleges in the state did raise tuition between fiscal 1969 and 1972. Tuition rates for the four-year span are translated into 1972 dollars in Table 21. It will be seen that three of the senior colleges and all of the junior colleges except one did not raise tuition enough to compensate for the falling value of the dollar. Table 22 compares increases in costs between fiscal years 1969 and 1972 in terms of both current dollars and 1972 dollars. The private colleges as a group did not raise tuition sufficiently to cover increased costs. Tightening of state appropriations forced the University System to charge a larger proportion of its costs to the students.** The figures for the private and proprietary junior colleges are misleading for the reason that there were changes in the numbers and character of the institutions between 1969 and 1972. (This reservation applies also to Table 19.) The situation of the state Vocational-Technical institutions was opposite to that of the University System, since increased state appropriations made it possible to reduce tuition.

*About Higher Education in New Hampshire, pp. 60, 61, 63.

#It may not hold for private colleges, but for the University System in fiscal 1972 debt service (interest and payments to retire principal) excluding that for residential facilities, was 10 per cent of the Educational and General Expenditures.

**A special session of the legislature in 1972 voted a supplemental appropriation for the University System to provide a $50 in-state tuition reduction at Durham and one of five per cent at the two state colleges. The 1973 session increased the University System appropriation to $36,259,000, a 29 per cent gain over the preceding biennium. This made possible further in-state tuition reduction of $50 at Durham. The out-of-state tuition was not affected, as the law requires that this be set to cover the per student instructional cost of the preceding fiscal year.

Table 21

CHANGES IN TUITION AND FEES IN NEW HAMPSHIRE COLLEGES,
CONVERTED TO 1972 DOLLARS (CONSUMER PRICE INDEX)

Colleges		1968-69	1969-70	1970-71	1971-72	4-Year Change
Belknap College		1,915	1,839	1,893	2,050	+ 135
Canaan College		1,664	1,768	1,731	1,575	- (89)
Colby College-New Hampshire		2,165	2,016	2,222	2,630	+ 465
Franconia College		3,084	2,762	3,129	3,150	+ 66
Nathaniel Hawthorne College		2,014	2,154	2,034	2,265	+ 251
Mount St. Mary College		1,641	1,491	1,669	1,600	- (41)
New England College		2,270	2,022	2,034	2,027	- (243)
New Hampshire College		1,321	1,436	1,617	1,825	+ 504
Notre Dame College		1,054	1,127	1,168	1,220	+ 166
Franklin Pierce College		2,095	2,154	2,242	2,150	+ 55
Rivier College		1,304	1,270	1,434	1,375	+ 71
St. Anselm's College		1,880	1,768	1,877	1,900	+ 20
Private Senior Average		1,867	1,817	1,921	1,981	+ 114
Dartmouth College		2,561	2,596	2,451	2,820	+ 259
Keene State College	in-state	634	686	656	766	+ 132
	non-res.	1,100	1,205	1,407	1,426	+ 326
Plymouth State College	in-state	518	692	628	724	+ 206
	non-res.	984	1,211	1,379	1,374	+ 390
Univ. of New Hampshire	in-state	801	977	932	1,029	+ 228
	non-res.	1,668	1,822	1,939	2,219	+ 551
University System Average	in-state	651	784	738	840	+ 189
	non-res.	1,250	1,413	1,575	1,673	+ 423
Castle College		-	-	-	1,000	-
New Eng. Aeronautical Institute		1,263	1,210	1,205	1,155	- (108)
White Pines College		1,397	1,326	1,252	1,200	- (197)
Private Junior Average		1,329	1,267	1,228	1,118	- (211)
Concord College		-	2,016	Bus. 1,126	Bus. 1,130	-
				Comp. 1,956	Comp. 1,500	-
Hesser College		-	939	1,152	1,175	-
McIntosh College		960	911	1,079	1,165	+ 205
Proprietary Junior Average		960	1,289	1,329	1,243	+ 283
N. H. Technical Institute	in-state	549	331	313	300	- (249)
	non-res.	1,132	884	834	800	- (332)
Voc-Tech. Colleges	in-state	454	309	292	280	- (174)
	non-res.	1,013	829	782	750	- (263)
Vocational-Technical Average	in-state	470	313	295	286	- (184)
	non-res.	1,033	837	790	760	- (273)

Source: Annual directories issued by Coordinating Board of Advanced Education and Accreditation.

Table 22

CHANGES IN PER STUDENT OPERATING COSTS AND TUITION CHARGES,
NEW HAMPSHIRE COLLEGES,* BETWEEN FISCAL 1969 AND FISCAL 1972

Colleges	Changes in Current Dollars				Changes in 1972 Dollars			
	Costs			Tuition & Fees	Costs			Tuition & Fees
	Educ. & General	Auxiliary Enterprises	Student Aid		Educ. & General	Auxiliary Enterprises	Student Aid	
Senior Colleges								
Private	$ + 537	$ + 106	$ + 5	$ + 377	$ + 250	$ + 7	$ - (21)	$ + 114
University System	+ 218	+ 86	+ 44	+ 281#	- (203)	- (8)	+ 27	+ 189#
Junior Colleges								
Private	- (58)	-(1325)	- (62)	- (29)	- (295)	-(1573)	- (73)	- (221)
Proprietary	+ 482	0	0	+ 482	+ 361	0	0	+ 283
Vocational-Technical	+ 441	- (74)	- (10)	- (184)#	+ 241	- (103)	- (16)	- (184)#

*Dartmouth College omitted. Omissions for cost figures for the other colleges are the same as in Table 19.

#In-state tuition and fees.

Sources: Basic financial statistics from HEGIS. Tuition and fees from annual directories issued by the Coordinating Board of Advanced Education and Accreditation. Adjustment to 1972 dollars based on Consumers' Price Index.

Raising tuition to increase gross income can be self-defeating. The laws of the market place apply, as Hosek and Pattee have shown in their University of New Hampshire study.*

This fundamental consideration has been largely ignored by college administrators and trustees in recent years. Rarely have the colleges kept statistics which would enable them to study the matter, (see above p.38) and the pressure for college admission has been such that on a year by year basis the effect of tuition increases has not been apparent. The director of admissions in one of the private colleges in this group reports that during the current season, however, a substantial increase in the tuition has been a major factor in a distinct drop in applications.

Financial Aid to Students

To enable colleges to charge a high enough tuition to enable them to receive from this source sufficient funds to balance their budgets without cancelling out the gain through reduced enrollment, two proposals have been advocated. One is for a massive program of financial grants to students from low and moderate income families. The other is for a large increase in the volume of loans to students.

Almost half of the states have programs of scholarships which usually are tenable at public or private institutions. In only a few is the sum of money involved substantial.# The federal Education Amendments of 1972 (Public Law 92-318) contained the most far-reaching basic student grant programs yet enacted. Basically it provided for a $1,400 grant to every student, reduced by what the family could reasonably be expected to contribute, not to exceed half of the student's college expenses. Although President Nixon's budget proposal for fiscal 1974 drastically reduced or even eliminated money for some higher education programs, it requested $959,000,000 for these grants.** Putting this money in a proposed budget does not necessarily put it in the students' pockets. But the law is on the books, and hopefully will someday be reasonably funded.

*Hosek and Pattee, The Demand for Education at the University of New Hampshire.

#About Higher Education in New Hampshire, pp. 87-88.

**Chronicle of Higher Education, VII, 18 (Feb. 5, 1973) p.1. In acting on the President's proposal, in an emergency supplemental appropriation bill, Congress put much of the money requested for the new basic grants back into established programs, voting $122,100,000 for the new grants. It is estimated these consequently will range from $50 to $200, with an average of $80. (Chronicle, VII, 29 (Apr. 23, 1973) pp. 1-2).

Two extensive studies, one by Robert W. Hartman* sponsored by the Carnegie Commission on Higher Education, and one by D. Bruce Johnstone,# sponsored by the Ford Foundation, consider the present and potential volume of student loans, sources of capital, length of repayment and interest rate, and methods of administration. The rapid increase of student borrowing during the past ten years under federally supported programs indicates that under proper conditions the volume might rise far above its present level.

Hartman estimates that student loans now are about a billion dollars a year. In spite of that volume he estimates that only about a fifth of those eligible are borrowing and that the individual loan is sufficient to pay only half of the cost at a public community college or a fifth of the cost of an expensive private college.**

There is strong support for lengthening the time during which a student loan is to be repaid, now typically ten years, and for making the yearly repayments a proportion of the individual's income, five per cent, for example, the "income contingent loan." Variations of this plan already are in effect at some institutions, which may speak of their loans as deferred tuition payment.## Those individuals with good incomes upon graduation would repay rapidly and under some plans more than they borrowed or "deferred." Those with low incomes would take a long time and after thirty years or so have the remaining balance forgiven. In the case of a woman who married, her repayment schedule might be figured on half the family income; the influence of such an arrangement would be to discourage the female's marrying, or if married, stopping work to become a full-time housewife.

If the volume of loans were sufficient to cover a substantial share of the college costs of all eligible students, some new source would need to be found for the capital funds. Suggestions are for a private corporation to market the notes from all the colleges on the open market, for federal government participation in such a corporation,

*Robert W. Hartman, Credit for College, a Public Policy for Student Loans, Carnegie Commission on Higher Education, New York, McGraw-Hill, 1971.

#D. Bruce Johnstone, New Patterns for College Lending: Income Contingent Loans, New York, Columbia University Press, 1972.

**Hartman, pp. 1-2.

##For descriptions of such plans in effect at Yale, Harvard-Radcliffe, and Duke see Johnstone, pp. 177-200.

or for the federal government to itself fund the entire operation.*

If there were some central student loan organization, which might be called a National Student Loan Bank, either with or without governmental participation, this agency might itself arrange the loans directly with the individual. Most authorities, however, would favor having the individual college or bank make the loan and then clear it with the central agency. One proposal is to have the Internal Revenue Service become the collection agent for student loans, if they are tied to the borrower's income level. This would have practical advantages, but some object on the grounds that the Service should not extend its collection activities beyond that of taxes due the government.

State Aid for Private Colleges

The state and federal grant and loan programs generally apply equally to students at public or private colleges. However, the considerable support largely from state governmental sources for public institutions is in effect financial aid to the students as it enables these colleges to charge lower tuition. One result is that public institutions are attracting an increasing proportion of the students. In 1939, 47 per cent of the students were in private colleges and 53 per cent in public. By 1968 the proportion had changed to 29 per cent in private and 71 per cent in public.# No doubt factors other than financial have been involved, but the lower cost at the public institutions is generally considered to be the major factor.

As the private colleges perform a socially useful service, it is argued that they should receive supplemental support from governmental sources, state or federal or both. Points commonly made in favor of such aid follow; for convenience they are lettered for identification.

A. A number of investigators have attempted to estimate what proportion of the benefits of a college education accrue to the individual and what to society for which it should pay; the findings are so subjective that they offer no useful conclusions.**

*The Education Amendments of 1972 provided for a government sponsored, tax exempt corporation, supported by private capital (except for a $5,000,000 authorization to get it started). Known as Sally Mae, this corporation is in the process of establishment.

#William H. McFarlane and Charles L. Wheeler, Legal and Political Issues of State Aid for Private Higher Education, Atlanta, Geo., Southern Education Board, 1971, p.56.

**Howard R. Bowen and Paul Servelle, Who Benefits from Higher Education and Who Should Pay?, American Association for Higher Education, Washington, D. C., 1972, pp. 21-28.

Comment: This is a philosophical point to which it is difficult to attach a dollar sign. It loses its force except as it increases the number of individuals getting a college education. It probably would have little of this effect in New Hampshire.

B. "The presence of the private sector extends diversity, provides a valuable dimension for developing quality, aids in protecting the autonomy of all higher education and fosters the type of institution which gives individual treatment to individual students."*

Comment: This compound thesis has validity for New Hampshire, except that some of the private colleges appear to have a negative rather than positive influence quality-wise. The private colleges do provide diversity. (See above p. 16a) Again, it is difficult to attach a dollar sign.

C. Makes higher education more widely available geographically and avoids large concentrations of students.#

Comment: Due to the compactness of the state and the dispersion of public institutions, they are now reasonably available geographically, with the exception of the lower Merrimack Valley. (See above, pp. 16, 17). The concentration of students at Durham is not large by national standards and could be reduced by directing some of the students to other parts of the University System.

D. Avoids public expenditures for college construction.#

Comment: The physical plants of the established public institutions are better equipped to handle more students than are the private colleges, except for dormitories (and except for Dartmouth). (See above, pp. 50, 52). The Merrimack Valley Branch is a separate case.

*Carnegie Commission on Higher Education, The Capitol and the Campus, State Responsibility for Post Secondary Education, McGraw Hill, New York, 1971, p. 66.

#Carol H. Shulman, State Aid to Higher Education, American Association for Higher Education, Washington, D. C., 1972, pp. 2-3.

The private senior colleges in the Merrimack region which might accommodate more students are largely single-sex. Those founded by religious orders have only recently started to move toward lay control. Their programs are more restricted than those envisaged for the Merrimack Valley Branch. To have them offer all the services planned for the Branch would involve logistic problems and fundamental changes of management and curricula.

E. Increasing the enrollment at private colleges enables them to increase efficiency by full utilization of their facilities.*

Comment: Putting more students on the campuses of most of the private colleges would reduce rather than increase academic efficiency, since most of them have limited academic facilities for their present enrollments. (See above p.50).

F. If private colleges close, this increases the load on tax-supported institutions.*

Comment: The public institutions could absorb the few in-state students now enrolled in private colleges which might close.

G. If private colleges close, potential gifts they might attract but which a public institution could not, would be lost.*

Comment: The University of New Hampshire appears to have been more successful in attracting gifts than most of the private colleges. (See above, p.56).

H. Tuition equalization between public and private institutions would restore competitiveness.#

Comment: This would seem to be axiomatic, but Durgin found that in his sample the University at Durham attracted a larger proportion of students from higher

*Carol H. Shulman, State Aid to Higher Education, American Association for Higher Education, Washington, D. C., 1972, pp. 2-3.

#William H. McFarlane and Charles L. Wheeler, Legal and Political Issues of State Aid for Private Higher Education, Southern Regional Education Board, Atlanta, Ga., 1971, p.3.

income brackets than did the private senior colleges with the reverse true for the lower brackets.* The state colleges at Keene and Plymouth were more comparable with the private colleges. This gives point to the title of a recent University of New Hampshire leaflet, Whatever Happened to Our Public University?# Unless state support of the University System increases sufficiently to allow a major reduction of tuition, this argument has limited application in New Hampshire.

I. Contracting with private universities for the education of students in specialized professional programs - medicine, dentistry, etc. - is cheaper than duplicating such professional schools in public institutions.

Comment: With the public institutions offering no professional degrees, this is obviously desirable. The only New Hampshire institution with which such an arrangement would be possible is the School of Medical Sciences at Dartmouth, with which such a contract has been authorized. Any other such arrangements would need to be with public or private universities in other states.

J. The economic benefits to a community from a college justify some public support.

Comment: This is treating higher education as an industry, not an educational enterprise, and has similar validity to offering public incentive to an industrial enterprise. However, a college does, in addition, offer social and cultural values not offered by an industrial enterprise. Pattee estimated that New England College, as an example, has an annual overall impact on the economy of the Henniker region of $10,900,000.**

If a private college accepts state support, it must expect to do something in return. Shulman, in summarizing the problems which may arise, comments: "The institutional autonomy and distinctiveness that are a private college's proudest characteristics may be threatened by increased dependence on state assistance....The government will want

*How New Hampshire Students Pay College Expenses, Table IX, p.19.

#University of New Hampshire Information Services, 1972.

**F. V. Pattee, The Impact of New England College on The Economy of New Hampshire, Durham, N. H., University of New Hampshire, 1973.

to review the institution's use of the state funds. The review will examine the institution's service to the public and the efficiency of its operation. The states also expect the assisted institution to participate in statewide planning and coordination....Independent institutions should be accountable to the public, but not subject to direct and detailed public intervention in their operations."*

There have been a number of legal conflicts over public aid to church-related colleges. Questions still remain, but McFarlane and Wheeler concluded after an extensive study that "There is good reason to believe that, in the last analysis, the subsidy issue at the state level is more a political than a legal question."#

The considerations for state aid to private colleges do not provide a clear basis for action. What would be the cost? To estimate that, it is necessary to propose a plan. Of the several possibilities, the one which would be most likely to gain support appears to be one which would subsidize tuition cost to the individual student. It was suggested by the Commission to Study and Report on the Goals, Purposes, Organization, and Financing of the State University System and Other Aspects of Higher Education (see above, p. 4) and a bill to accomplish it was introduced in the 1971 and 1973 sessions of the legislature.

Let it be assumed that a plan were adopted which would pay to the student the difference between the average in-state tuition and fees in the University System, adjusted to the number of in-state students attending each of the three institutions, ($895 in 1972-3) and the private accredited New Hampshire college he chose to attend. Let this difference be limited to the difference between the average state institution tuition and the average state institution cost of instruction ($1224 in 1971-2, the last year for which figures are available). This limitation is proposed for otherwise at some private colleges the state would be paying more than it pays for instruction at a public institution.

On the basis of these figures, for the number of in-state students in the fall of 1972 at the colleges now accredited or in the status of Recognition for Accreditation by the New England Association of Schools and Colleges, the cost to the state would have been $2,173,907 as shown in Table 23. If a tuition subsidization plan of this sort were in effect, presumably students now attending the University System for financial reasons would enroll instead at private colleges. Durgin found in his

*Shulman, op. cit., pp. 6-7.

#McFarlane and Wheeler, op. cit., p. 37.

sample* that 13 per cent of the students in the University System listed financial reasons as the principal reason for attending one of the public institutions. Given the pattern of college attendance by New Hampshire students, about two-fifths of whom go out of state to college, many of these probably were influenced by the cost of attending an out-of-state colleges, rather than a private one in New Hampshire. But for the sake of making an estimate of the impact of a tuition subsidization plan, let it be assumed that 13 per cent of the in-state students in the University System would enroll instead in a New Hampshire private college. This would be 1,047 students. At the average equalization payment, $1,027, this would increase the cost of the program to a total of $3,251,270. This is within $84,000 of the combined state operating appropriation for both Keene and Plymouth State Colleges for 1973-4.#

Unless the tuition subsidization plan increased the number of in-state students, without a corresponding loss of out-of-state students, the private colleges would not gain in tuition income. They probably would be able to make a substantial reduction in the $1,355,000 (not including Dartmouth) in student aid grants they awarded in 1971-2. If they had a sizeable increase in the number of in-state students, this would result in increased income only if these new students were enrolled in addition to their present out-of-state students. Most of them already are enrolling more students than they have academic facilities for, using the U.S. median as a measure. (See above, p.50). This would call for new construction, which would make in-roads on what financial gain they otherwise would have.

If the subsidy to private college students were new money, in addition to what the state otherwise would appropriate for higher education, and if the number of in-state students choosing private colleges did not increase appreciably, the tuition subsidization plan would have little effect on the University System.

If the money were taken from the University System appropriation, it either would result in an increase in tuition in the public institutions or a reduction in the quantity or quality of their offerings. If the potential transfer of in-state students from public to private institutions resulted, there would be less need for new construction at the state colleges, especially Plymouth. The Durham campus would be little

*Durgin, How New Hampshire Students Pay for College, p.23.

#Senate Bill 234 in the 1973 legislative session, which proposed a tuition subsidization plan, called for an annual appropriation of $75,000.

affected, except to reduce the need for more dormitory space - which is self-liquidating. There would appear to be a possible reduction in faculty, but this would be primarily in basic freshman and sophomore courses, which have the lowest per-student cost. In the case of the University at Durham, the loss of students would be in the College of Liberal Arts, which has the lowest per-student costs.

Table 23

ESTIMATED COST OF A PLAN TO SUBSIDIZE TUITION OF STUDENTS IN PRIVATE COLLEGES

College	Tuition & Fees '72-3	Amount Over Univ.System Aver.($895)	Difference with $1224 Limitation	No. In-State Students	Estimated Cost
Colby - N. H.	$2630	$1735	$1224	74	$92,056
Dartmouth	3270	2375	1224	194	237,456
Franconia	3300	2405	1224	29	35,496
N. Hawthorne	2215	1320	1224	38	46,512
Mt. St. Mary	1700	805	805	63	50,712
New England College	2550	1655	1224	158	193,392
New Eng. Aero.	1245	350	350	145	50,750
New Hampshire College	2125	1230	1224	627	767,448
Notre Dame	1350	455	455	207	94,185
Franklin Pierce	2270	1375	1224	48	58,752
Rivier	1500	605	605	173	104,060
St. Anselm's	2150	1255	1224	362	443,088
Total					$2,173,907

Chapter VI

ADMINISTRATION AND COORDINATION

The Public Sector

There are three state agencies concerned with postsecondary education in New Hampshire: the Board of Trustees of the University of New Hampshire, the Post-Secondary Education Division of the State Board of Education, and the new Postsecondary Education Commission.

The Board of Trustees of the University is a semi-autonomous body of twenty-four members: six ex officio--the presidents of the three units of the University System, the Governor, the Commissioner of Education, and the Commissioner of Agriculture; eleven citizens appointed for four-year overlapping terms by the Governor with the consent of the Executive Council; six alumni elected by the alumni for four-year terms; and one student appointed by the Governor with the consent of the Executive Council. Under the New Hampshire Right-to-Know law, meetings of the Trustees and their records are open to the public, except those dealing with personnel matters. One teacher, representing the three faculties, sits with the Board with the right to participate in discussions but without vote.

The two then state teachers colleges at Keene and Plymouth in 1963 were shifted from the control of the State Board of Education to that of the University Trustees to become general colleges of the University System. They continue to operate with considerable autonomy. There is no separate administrative staff for the University System as such; the president of the University at Durham is the chief administrative officer, with the presidents of the other two campuses serving with him as an overall administrative board. When Dr. Thomas N. Bonner became president at the Durham campus in 1971, he undertook to strengthen the University-wide aspects of the arrangement. A provost was appointed with primary responsibility for the Durham campus, allowing the president to devote more attention to the System as a whole. Credits are now freely transferable between the three campuses, and a School of Continuing Studies has been established encompassing all three campuses. Each campus controls its own admissions and there is substantial difference between the

academic capabilities of the students at Durham and at the other two locations. (See above, p.16a) Graduate work, except in the field of education at the master's level, is limited to the Durham campus.

The Thompson School of Applied Science on the Durham campus of the University is an outgrowth of a two-year agricultural course established at the turn of the century. In recent years it has granted the associate degree and has added programs in other vocational fields. The new School of Continuing Studies of the University grants an associate, as well as baccalaureate, degree in general studies. Keene State College, having staff and equipment available in its industrial arts teacher preparation program, offers associate degree programs in some mechanical fields, with concurrence of the State Board of Education. Plymouth State College is offering associate degrees in general studies, biological science, and business. The Merrimack Valley Branch offers an associate in arts, transferrable to other units of the University System. It is planning other associate degree vocationally-oriented programs in a variety of fields, excluding only mechanical.

The New Hampshire Technical Institute and the six Vocational-Technical Colleges are administered by the Post-Secondary Education Division of the State Department of Education, under the control of the State Board of Education. The Technical Institute has more autonomy than do the six Colleges. They all are under a legislative line-item budget and the fiscal and personnel controls of the state government.

Numerous reports have advocated the establishment of public comprehensive community colleges in New Hampshire developing out of the vocational-technical institutions.* Presently the vocational technical institutions of the State Board of Education confine their offerings to vocational programs with a minimum of general studies. Many of the programs lead to an associate degree, but only from the Technical Institute have credits been transferrable to the University System.

The desire of the Division of Post-Secondary Education of the State Board of Education to move toward comprehensive community colleges and the expansion of associate degree programs in the University System, particularly at the Merrimack Valley Branch, has led to rivalry between the two groups. The long-range plans of the Division of Post-Secondary Education call for new curricula in such fields as agriculture, business, food service, liberal arts, secretarial science, and child care--already offered or being eyed by units of the University System.

*State Board of Education, The Red Jacket, Comprehensive Community College Report, Concord, N. H., December, 1971, p.14.

The attitude of the directors of the vocational-technical institutions was forcefully expressed in a statement of November, 1971.*

"The State Board of Education, itself, and supposedly an agreement with the Sub-Committee of the University of New Hampshire Board of Trustees...had agreed that career oriented post-secondary education at the two-year and below level would be undertaken and pursued at the Vocational-Technical Colleges and at the Technical Institute, whereas transfer programs would, for the time being and pending further legislative direction of two-years programs, be in the province of the University of New Hampshire system.

"While those of us under the supervision and direction of the State Board of Education have operated within the agreed upon position...developments at the Merrimack Valley Branch...have both been in violation of legislative intent, as we see it, and of the supposed agreement between the two Boards. This has been obvious in spite of efforts through a number of coordinating groups in addition to the two meetings of the two Boards, but was the substance of a recently announced, a wonderfully articulated community college philosophy and plan for the Merrimack Valley Branch....Specifically included in the proposed offerings were those of a career oriented nature, including the fields of business, services, and industry. Not only was the announcement in blatant disregard for the agreements between the Boards... it was also in violation of recent agreements between personnel in the State Education Department and those at the University."

The Educational Policies Committee of the University Trustees issued a statement of its position on community colleges six months later. It suggested some initial guidelines:

"1) Artisan-craftsman programs and such vocational-technical programs as those offered in the Vocational-Technical Colleges should be the responsibility of the Department of Education. If the University System's campuses appear to be logical locations for some of these programs...every attempt should be made to assist the Department of Education in establishing and operating these programs. If it does not, the University may offer such programs providing they do not compete with those offered by the Board of Education in the immediate locality.

*op. cit. The Red Jacket, pp. 14-5.

"2) Degree programs which have sizeable liberal studies components should be the responsibility of the University System....

"3) Both the University System and the State Department of Education should share the responsibility for the development of pre-professional and para-professional programs. Which agency should develop a given program should depend on the expertise available and geographical requirements....

"It may be that in certain programs offered by the Department of Education the University system may provide certain services such as instruction in the liberal arts studies courses or in specialized fields."

The report went on to say: "The Merrimack Valley Branch should develop as quickly as possible into a comprehensive community college....providing a wide breadth of part-time and full-time programs, and additional career programs should be developed to meet the needs of citizens in the area....In connection with this, it is also the policy of the University that the Branch would cooperate fully with the Technical Institute in Concord, with the Vocational-Technical Colleges in Manchester and Nashua and with private institutions in the Merrimack Valley area.

"Further, the Branch would not necessarily need to offer all of a program; it should be possible to develop programs which draw upon courses given by different educational institutions in the area. In order to assure a maximum amount of interchange of ideas and plans and to encourage cooperation, it is proposed that representatives of institutions of higher education in the Valley meet regularly for discussion."

The authors of the University report admitted that the interest of that institution in junior college programs was a new development, commenting: "In general the faculty of the colleges at Durham during the '60's looked unfavorably at 'how-to-do-it' programs or portions of programs. As a result Secretarial Studies, for example, was eliminated. The administration was preoccupied primarily with the expansion of undergraduate and graduate programs and was not particularly enthusiastic about two-year program development....In the last couple of years the University has turned about face in its interest in the two-year college development." The University report had some reservations about the freedom with which the associate degree is granted by community colleges: "Artisan-craftsman programs should be awarded certificates not associate degrees. Earlier strees was placed on the need to give the associate degree a measure of status in this State. This degree should be reserved for

collegiate work and not depreciated."*

A publication of the New England Board of Higher Education indicates that all six of the state universities in the region and a number of the senior state colleges offer career-oriented associate degree programs.#

The uninhibited exchange of views in the Red Jacket and Yellow Jacket reports appears to have cleared the air and led to more cooperation between the University System and the vocational-technical institutions. Beginning in September 1973 the Berlin Vocational-Technical College and the University's School of Continuing Studies are collaborating in establishing a pilot associate in arts degree in general studies at the Berlin campus. Of the 64 required credits, 32 are to be taken in Vocational-Technical College courses and 32 in University courses offered at the Berlin campus or in nearby communities. A student satisfying part of the credit requirement by transfer or examination will take half of his remaining credits under the auspices of each institution.

The suggestion that representatives of the higher education institutions in the Merrimack Valley get together has been adopted. An informal organization of their academic deans, plus representatives of the Post-Secondary Education Division of the State Board of Education, called Associated Colleges of the Merrimack Valley has been meeting for discussion of their program and plans.

The third state agency is the Postsecondary Education Commission which came into existence on July 1, 1973.** Portions of the law read:

"Declarations of Purpose. It is the purpose of this chapter to consolidate and improve the role of the state of New Hampshire in planning for the most effective use of its resources in providing adequate postsecondary education including vocational education for its citizens and to facilitate securing for the students and educational institutions of the state the benefits provided by the congress in public law 92-318 Education Amendments of 1972 and other federal programs. For said purpose there shall be established a New Hampshire postsecondary education commission as suggested in section 1202 of said public law 92-318. The postsecondary education commission shall be the successor to both the coordinating board of advanced education and accreditation and New Hampshire higher education facilities commission."

*The University of New Hampshire, The Yellow Jacket, Comprehensive Community College Report, Durham, N. H., May, 1972, pp. 4-7.

#New England Board of Higher Education, New England Regional Student Program, 1973-74, Undergraduate Level, Wellesley, Mass., 1973.

**Laws of New Hampshire, 1973, Chapter 533, to be included in the Revised Statutes Annotated as Chapter 188-D.

The membership of twenty-one consists of: six representatives of the University System; three representatives of the State Board of Education; five representatives of the private senior colleges named by the N. H. College and University Council (see below, p.80); two representing junior colleges, proprietary schools, or other colleges not members of the College and University Council, to be appointed by the Governor and Executive Council; and four laymen having no official connection with any postsecondary institution, to be appointed by the Governor and Council.

The Commission is given the following powers:

"The Commission is to conduct studies of postsecondary education in the state and to prepare and keep current plans designed to avoid duplication and make effective use of the state's resources in providing adequate opportunities for such education for the residents of the state. Said commission may establish subcommittees and utilize existing agencies in the formulating of such plans. Said commission may apply for directly, and receive directly federal grants and allocations. The commission may also make recommendations regarding the application in the overall program if other postsecondary education agencies, hereinafter, are established."

Passed to the new Commission is authority previously exercised by the Coordinating Board of Advanced Education and Accreditation such as: approval of branches of out-of-state colleges and of extension courses offered in the state by such colleges; approval of plans for proposed new postsecondary institutions or reactivation of one which has not offered courses for three years; control of the use by any new organization of a name indicating it is an institution of higher learning; authorization of a college to issue certain degrees within limits as to level set for the college by the legislature; preservation and issuance of copies of academic records of students from institutions ceasing to operate.

Suggestions to individual colleges resulting from the Commission's planning functions may be adopted by them, but except for its voice in the allocation of certain federal funds it has no statutory authority to back up its recommendations. Since the new Commission is in the process of organization as this report is being written, it is impossible to comment on the effectiveness of its operation.

The Private Sector

The private colleges all have boards of trustees conforming to the usual pattern of appointment and responsibility. The church-related senior colleges, with the exception of Mount St. Mary, have laymen on their boards but retain close ties with their founding religious orders. The church-related junior college (Castle) has no lay representation on its board. The proprietary junior colleges are managed as business rather than educational corporations.

Since 1966 the regionally accredited New Hampshire senior colleges, private and public, except Dartmouth and Nathaniel Hawthorne, have participated in a consortium, the New Hampshire College and University Council.* Funded largely by federal grants, supplemented by institutional assessments and private gifts, it has arranged a variety of cooperative enterprises, both managerial and academic. These include inter-campus library service, purchasing through the state purchasing agency, inter-college enrollment especially during a common one-month January term,# joint use of specialized faculty, joint academic and cultural programs, and so on.** The consortium has a headquarters staff in Manchester and nearly a score of committees concerned with its various activities.

Regional Coordination

Regionally coordination is secured through the New England Board of Higher Education. This is an official agency financed basically by state appropriations, and dealing principally, but not exclusively, with public institutions.## It has a governing board made up of representatives of the six states and a professionally staffed headquarters. It gathers and publishes information about New England colleges and universities, including adequacy of opportunities for professional education,***

*About Higher Education in New Hampshire, pp. 5-6
Also: New Hampshire College and University Council, 1970-71 Annual Report, Manchester, N. H., 1971.

#N. H. College and University Council, January Term Programs 1973, Manchester, N. H., 1972.

**For a summary of consortia endeavors nationally, see: Barry Schwenkmeyer and Mary Ellen Goodman, Putting Cooperation to Work, New York, Management Division Academy for Educational Development, Inc., April 1972.

##New Hampshire Revised Statutes, Annotated, Chapter 200-A, enacted in 1955.

***The most recent example of a study of this sort is The Need for A College of Veterinary Medicine to Serve New England and New Jersey, Wellesley, Mass. 1973.

and sponsors other activities of benefit to higher education. One of these is the New England Library Information Network (NELINET) which is an ambitious project to link through a computer network the principal college, university, and public libraries. Associated with this will be the Northeast Academic Science Information Center.

Although the activities of the Board are concerned principally with New England institutions, it may enter into agreements with institutions outside the region. Its most visible activity is its regional student exchange plan. Essentially this provides that a student of one New England state may attend a public institution in aother New England state, paying in-state tuition, to pursue a course of study not available in his home state.* The accepting college must agree to the inclusion of its specific programs in the available offerings. At the two-year college level the program is even broader, since a student may attend a college in another state if the desired program is within easier commuting distance than a similar program in his home state. This is a great advantage to students in southern New Hampshire due to the existence of several Massachusetts community colleges within commuting distance.

The regional student exchange program has grown steadily. In 1968-9 61 students came to New Hampshire under the program and 54 went from New Hampshire to other New England states. In 1972-3, 289 students came into the state and 317 went out. Distribution of these students by level and state is shown in Table 24.

Since no money is paid from one state to another under the student exchange program, it does not extend to high-cost programs in the medical field. For some years New Hampshire had a contract with the University of Vermont School of Medicine under which New Hampshire subsidized five students in each class for $5,000 a year each. When in 1972 the New Hampshire legislature attached to its appropriation for this a provision that the student must pay back to the state the entire $20,000 subsidization if he practiced outside the state or $10,000 if he practiced within the state, the Vermont Medical School refused to accept new students under this provision. The 1973 legislature authorized a similar program at the Dartmouth School of Medical Science. Similar bills passed by the 1973 legislature for students at the Tufts University School of Dentistry and the Ohio State University School of Veterinary Medicine were vetoed by the Governor.

*About Higher Education in New Hampshire, pp. 29-30.
Also: New England Board of Higher Education, New England Regional Student Program, 1973-74, Undergraduate Level, and New England Regional Student Programs, 1973-74, Graduate Level, Wellesley, Mass. 1973.

Table 24

NEW HAMPSHIRE PARTICIPATION IN REGIONAL STUDENT EXCHANGE PROGRAM, 1972-73

State	Level					
	Two Year		Undergrad.		Graduate	
	In	Out	In	Out	In	Out
Connecticut	8	3	48	30	2	19
Maine	15	6	35	8	2	15*
Massachusetts	27	151	73	11	0	25
Rhode Island	0	0	32	11	1	9
Vermont	38	14	8	13	0	2#
Total	88	174	196	73	5	70

Source: New England Board of Higher Education, New England Regional Student Program Enrollment Report, 1972-73, Wellesley, Mass. 1973.

*Of this 15, 14 were enrolled in law.

#This does not include 18 in the University of Vermont School of Medicine under a contract arrangement.

A recent evaluation of the student exchange program* found it to be flexible and adaptable and to result in a favorable balance of costs and benefits but ineffective in fostering significant regional planning.# The report observed: "The most promising opportunity in the coming years appears to be the potential for strengthening publicly-supported graduate education through a pattern of specialization between the six state universities."**

The report recommended: "In order to further study the graduate question and to explore other opportunities for cooperation between the state universities, NEBHE and the state university presidents should jointly establish and fund the staff position "State University Coordinator." This individual would report to both NEBHE and the state university presidents. His responsibility would be to study, initiate and support a variety of cooperative efforts between the New England state universities."##

The presidents of the six universities had on their own recognized the advantages of closer cooperation but not of working on the matter through the New England Board. Meeting in Durham in November 1972 the presidents of the universities adopted "The Durham Declaration" calling for "common planning and coordination in our academic and public service areas." A consultant was commissioned to propose a plan of action. After consultation with the staffs of the universities, in April 1973, he proposed: "The creation of a six university Joint Operations Committee, composed of representatives from each of the universities plus a chairman employed by the presidents, to conduct joint program planning, to supervise university committees and task forces assigned to work on special cooperative projects, and to make recommendations to the presidents." Such a committee is being established with headquarters at the New England Center for Continuing Education in Durham, which itself is a joint venture of the six universities.

*New England Board of Higher Education, New England Regional Student Program Evaluation, Steffen W. Plehn, project directory, Wellesley, Mass., December, 1972, p.2.

#A New Hampshire legislator who has been a member of the Board since its founding believes that it has been handicapped in securing more coordination because the Board has been so enlarged that meetings are poorly attended. Policies seem to be determined by the professional staff without due consultation with representatives of the states; for example, the director has approached legislatures and governors directly instead of through the state representatives.

**Ibid., p.3.

##Ibid., p.3.

Chapter VII

RECOMMENDATIONS

Following are recommendations resulting from this study. An attempt has been made to present them in a logical order. They have been identified by letter rather than number to avoid the implication that they are presented in order of importance. Each recommendation is followed by a statement of the rationale for it. In parentheses following each statement of rationale are references to pages in the report which have particular bearing on that recommendation.

The tentative recommendations were presented for discussion at a meeting at the Technical Institute in Concord on August 21, 1973. Seventeen heads of colleges or their representatives and six other interested educational officials attended. As a result of this meeting, in addition to minor modifications in a few of the recommendations, one recommendation was substantially modified and one was changed. Although the college presidents had the opportunity to express themselves on the recommendations, they were not asked to arrive at a consensus.

A Colleges should be very cautious in making plans based on increasing enrollment during the next decade; after that they should plan on decreasing enrollment.

Rationale: Forecasting is a hazardous undertaking, but the indications both nationally and in the state are clear that barring some unlikely development college enrollments are now on a plateau and will decline within a decade. The enrollment of some colleges probably will increase, due to unique situations, but this will only make the outlook for others darker. Optimism is a misleading substitute for facts. It is easier to expand rapidly than to maintain an over-built institution. (pp. 32-40).

B Any future construction should be planned to improve the balance between the various classifications of space.

Rationale: No college plant is in balance for all facilities. It is desirable to seek a balance, but in view of the enrollment outlook investment in new plant should be undertaken with caution. Remodeling, where feasible, is a more prudent solution. (p.50)

C The first priority for academic construction at the existing University System institutions should be classroom and laboratory space for Plymouth State College.

Rationale: Assuming maintenance of present enrollment, additional academic space is needed at Plymouth. (p.50)

D More residential capacity should be provided at the University campus in Durham.

Rationale: Overcrowded dormitories at the Durham campus are a chronic situation. Rental of temporary dormitory space in surrounding communities is uneconomical and unsatisfactory educationally. As income from residential buildings liquidates their cost, they are no expense to the state. Even if the enrollment were to decline, additional residential facilities are needed. (p. 52)

E Colleges should keep sufficient statistics regarding applications for admission to allow them to establish a model for estimating trends.

Rationale: Tuition income, dependent directly on enrollment, is the life blood of most private colleges in New Hampshire yet they lack records which would enable forecasting the effects on enrollment of such factors as increases in tuition. This business-like procedure would be in their best interest. (p.38)

F All colleges should keep current on future opportunities for employment in the fields for which they offer preparation. This information should be used in counseling students and in planning expansion and contraction of programs.

Rationale: The value such foresight would have is illustrated by the present excess of students trained to teach. Realistic analysis of the market prospects would have ameliorated the current situation. The surplus of trained teachers is expected to continue indefinitely. Conversely, there is a shortage of paramedicals. Overreaction to this could result in a few years in a situation comparable with the present situation in teaching; the demand for paramedicals is not limitless. (pp. 19-28, 44-45)

G Colleges planning new or significantly enlarged health manpower programs should make sure beforehand that their students will have adequate opportunities for clinical experience.

Rationale: Clinical experience is essential in a paramedical program. This is expensive, and the capacity of health agencies to provide on-the-job training opportunities has a ceiling. The time to arrange for clinical experience is before a program is initiated. (p.25)

H Although the Postsecondary Education Commission lacks authority to control establishment of new major programs, it should counsel the colleges by informing them of national trends and the plans of other New Hampshire institutions.

Rationale: A single new program in some field might prosper, whereas two or three competing with each other might result in no one of them succeeding. (pp.44-45,78-79)

I Colleges should not be tempted to try to increase enrollment by adding new programs unless they already have the capability to offer them as quality programs or are prepared to make the necessary investment to do so.

Rationale: Some new programs can be initiated largely by combinations of courses already offered or by reassigning present facilities. Often new faculty, library holdings, or laboratories must be provided. The cost of these must be balanced against the reasonably foreseen income from tuition paid by additional students attracted. (pp.10-13)

J The Postsecondary Education Commission should give formal recognition to the executive committee of the Health Careers Council as the Commission's advisory committee in health careers education.

Rationale: The federal law leading to the establishment of the Postsecondary Education Commission encourages, in some cases requires, such commissions to appoint advisory committees to guide them in specialized areas. The training of medical personnel is one such area, and the Health Careers Council is an established body with trained personnel and experience fitting it for the task. Its membership includes nearly all of the training and employing agencies in the state. (p.22)

K A tuition subsidization plan is desirable to increase student options and to aid the private colleges financially, but it should be supported by new money or it will reduce the service to in-state students offered by the University System.

Rationale: Such a plan would probably be a financial advantage to the private colleges; but, given the present prospect of a stagnant enrollment, to the state it either would be an additional cost or would lessen the service to the students of the University System. It could have been a financial advantage to the state during the enrollment surge of the '60's. (pp. 4, 69-73)

L The state should appropriate sufficient scholarship funds to be administered by the Postsecondary Education Commission, to match any federal student incentive grants which may become available.

Rationale: The Education Amendments of 1972 (PL 92-318) authorize a federal student incentive grant program which requires that to participate a state must match the federal grants on a 50-50 basis. New Hampshire should be prepared to take advantage of such aid for its students. The money might be appropriated to activate R.S.A. 200-D which provides for a state scholarship program, but it is probable this state law would need to be amended to meet federal guidelines. The student incentive grant program is in addition to the basic student grant program, which is entirely a federal matter. (pp. 41-43, 65)

M The legislature should make long-term commitments to accredited institutions to subsidize the education of New Hampshire residents in professions not provided for by the University System or the Regional Student Program of the New England Board of Higher Education. In return these institutions would agree to enroll a certain minimum of qualified New Hampshire residents. There should be no requirement that the students benefited reimburse the state in whole or in part for expenditures made for them.

Rationale: New Hampshire residents are entitled to have opportunities for training in any profession. In high-cost fields such as medicine, dentistry, and veterinary medicine they are at a disadvantage in competition for admission against residents of states which support such programs. Contract arrangements are much cheaper for the state than establishing and maintaining such professional schools. Since New Hampshire requires the services of many such professionals, it is just that it should share in the cost of their training. New Hampshire natives will have a tendency to return to the state to practice even though there is no compulsion for them to do so. (pp. 70, 81-83)

N In view of the cultural and economic advantages to a community of a local college, all college property, including residential, should be exempt from local property taxes.

Rationale: Colleges deserve favored treatment over business enterprises because they are non-profit and make important contributions to the cultural life of a community. (pp. 1-2, 70)

O The legislature should adopt and then honor a formula for determining the biennial University System appropriation. Basing it on an analysis of past experience, it is suggested that the formula include: a measure of wealth, such as equalized valuation of real property in the state; the consumer price index; and enrollment in the University System.

Rationale: The advantage for efficient management of enabling the trustees of the University System to figure before the end of each biennial session of the legislature the amount of the state appropriation to the University of New Hampshire Fund seems obvious. The principal was recognized in Revised Statutes Annotated 187:24, the so-called millage law, enacted in 1925. This formula, because of its inflexibility and lack of adjustment to changes in the University System, has for some years been a dead letter. A revised, more flexible formula would be an advantage both to the University System and to the state budget officers. (p. 4)

P All state appropriations for postsecondary education, aside from those for the University System (New England Board of Higher Education, contracts for professional education with non-state institutions, etc.) should be included in the budget of the Postsecondary Education Commission.

Rationale: These are educational activities and should be administered by the state agency charged with supervision of such activities. (pp. 78-79)

Q The movement to coordinate closely the continuing education activities of the University System through the new School of Continuing Studies should be strongly supported. This support should include reasonable financing by the State. "Career ladders" should be built into the program.

Rationale: Increasing emphasis on continuing education is a national movement which appears likely to be sustained. It is not probable that a major part of the college-age population will elect to get its basic postsecondary education by part-time or self study, the so-called University Without Walls. But some will choose this course and for those who do the opportunity and guidance should be available. For most, continuing education will remain a means of supplementing previous full-time study, frequently to improve or up-date vocational competence. (pp. 5, 25-31)

R The private colleges wishing to offer continuing education courses should do so in cooperation with the School of Continuing Studies of the University System, which in turn should utilize the capabilities of the private colleges in its program. This does not preclude the continuation of present viable degree programs by private colleges, or the establishment of new ones where conditions warrant. To secure participation by all educational agencies the Postsecondary Education Commission should appoint a coordinating council on continuing education representing both the public and private sectors.

Rationale: The University System is now the dominant factor in Continuing Education in the state and its resources and geographic spread indicate that it will remain so. Involvement of the private colleges which do not themselves have well-developed programs will benefit the University's program. To the student seeking a degree by part-time study, a central accrediting and record keeping agency is a great advantage. The steps the New England state universities are taking to coordinate their work include regional coordination of continuing education, with the likelihood that credits would be freely transferrable across state lines. Thus a central clearing house in New Hampshire would be a benefit to the student should he find it advantageous to take courses in other states.(pp. 28-31, 83)

S The University's School of Continuing Studies should establish a structured master's degree in general studies to serve students who had a restrictive undergraduate curriculum and who wish to broaden their education.

Rationale: This would encourage such students, who are not attracted by the specialization typical of graduate programs, to continue their education. (pp.12-13, 28-31)

T The public and private postsecondary institutions in the state, especially those in the College and University Council, should operate under a uniform academic calendar in order to facilitate the sharing of instructional opportunities.

Rationale: This would facilitate inter-institutional registration of students and sharing of faculty. Tradition rather than facts have often determined present calendars. (p.80)

U Institutions in the College and University Council should experiment with scheduling of courses, having potentially appreciable inter-institutional registration, in larger blocks of time than is traditionally done.

Rationale: This would facilitate transportation from campus to campus. (p.80)

V The three Catholic Colleges in the Manchester area should consolidate or at least increase their coordination.

Rationale: Close involvement of the Catholic colleges in the Manchester area in the program of the Merrimack Valley Branch, as proposed in Recommendation W, would change their character. They may wish not to make this change; the decision is, of course, up to them. No matter what course they choose, they would find strength in unity. (pp. 69,78)

W The University System should proceed with the development of its Merrimack Valley Branch along the lines currently contemplated, basically a comprehensive community college and continuing education center, utilizing the instructional capabilities of nearby institutions to the maximum feasible. Administrative and limited academic facilities should be constructed.

Rationale: Enrollment in the Branch has proved the demand for such an institution in this center of the state's population. The existing private colleges offer a reasonable variety of undergraduate liberal arts, teacher preparation, and business education. Adoption of a tuition subsidization plan (Recommendation K) would bring the cost to the student at these colleges within the range of that at a University System institution. Some consolidation (Recommendation V) would strengthen the private colleges. Becoming co-educational and extending their lay control presumably would make the Catholic colleges more attractive to students. This is the price they should expect to pay for public support. A large amount of inter-institutional coordination would involve management problems, but it would save money for the state and help support the private colleges. The new organization, Associated Colleges of the Merrimack Valley, could be a vehicle for this coordination. Duplicating in Manchester the specialized programs available in Durham would be uneconomical for the state. Commuting to Durham for this work in the junior and senior years would be feasible, or living on campus for two years would be cheaper than doing so for four. (pp. 4,77)

X The vocational-technical colleges, while retaining an emphasis on vocational-technical education, should become comprehensive community colleges. They should do this by cooperative arrangements with the School of Continuing Studies of the University of New Hampshire or with a nearby college or colleges.

Rationale: The proposal to make these institutions comprehensive community colleges has been made by every study of the question for the past decade. It is time to get moving. The

cooperative arrangement suggested, which is being tried as a pilot program beginning in September 1973 by the Berlin Vocational-Technical College and the School of Continuing Studies of the University, provides a very economical means of making the transition. (pp.3-5, 75-78)

Y A Board of Community Colleges should be established for the control and management of the vocational-technical institutions. This Board should have eleven members: two representing the University System, two representing the State Board of Education, one representing the Post-secondary Education Commission, the chief administrative officer of the community college system, and five, of which one should be a student, representing the geographic areas of the state appointed by the Governor and Council. This Board should have management and fiscal authority similar to that of the University Board of Trustees. The Post-secondary Education Commission should have authority to settle potential conflicts between the University Board of Trustees and the Board of Community Colleges.

Rationale: The governance and management of the vocational-technical institutions involves problems and procedures different from those relating to the elementary and secondary schools which are the primary concern of the State Board of Education and the Department of Education. These postsecondary institutions consequently would benefit from being governed by a body of which they would be the primary concern. The vocational-technical institutions should be closely coordinated with the secondary schools, especially in the area of vocational education, and with the University System; it for this reason that substantial representation on the proposed new board of the State Board of Education and of the University System is suggested. The University System has a number of associate degree, vocationally-oriented programs and the continuance, and possible expansion, of these should not be discouraged. To insure their close coordination with the activities of the proposed community college system transference of their control, where they are organized as distinct units - such as the Thompson School of Applied Science on the Durham campus and the mechanical programs at Keene - to the new Board of Community Colleges should be considered.

An alternative to creating a new Board to govern the Vocational-Technical institutions would be to transfer their control to the University System. Since there are numerous points at which the activities of the two groups should be coordinated, having a joint administration would provide the most orderly management. There is danger, however, that because the University administrators usually are concerned primarily with baccalaureate and graduate work the community college activities might be inadequately supported. (pp.75-79)

Z The project of the presidents of the six New England state universities to coordinate their programs should be pursued vigorously, but means should be found to relate it to the New England Board of Higher Education without surrendering its management to that agency.

Rationale: The need for the coordination is manifest. Its direction should be left to the universities, since the New England Board has shown itself unable to achieve the desired coordination. But care should be taken not to weaken the Board's regional student program. Desirable would be modification of the New England Board's operating policies so that it could share in the University coordination and could extend it to the state colleges and to the community colleges. (pp. 80-83)

APPENDIX A

Letter to College Presidents Requesting Descriptive Information

At the Presidents' Conference on the higher education planning project, held at St. Anselm's College in October, it was the consensus that an effort should be made to gather descriptive information about the colleges to supplement the statistical material being collected. The difficulty of doing this objectively was recognized. To give the college presidents an opportunity to write without rigid prescription but with enough uniformity to make comparison possible, I agreed to prepare an outline that could be followed by those who wished to prepare a statement. This is my attempt to do that. You, or a member of your staff, are invited to prepare a reply, but there will be no follow-up of those who do not participate.

I. What type of student is served best by your college?

   a. Academic: scholastic aptitude, objective or lack thereof.

   b. Socio-economic background.

   c. Geographic source.

   If available, a profile of your freshman class (test score and high school record distribution, etc.) would be helpful.

II. In what disciplines is your college strongest, and what is the basis for your judgement?

III. What characterizes the social life of your students: housing, activities, transportation, etc.

IV. What are your plans, or hopes for the future?

   a. Academic

   b. Enrollment

   c. Physical Plant

   d. Financial support

   e. Continuing education activities

V. What are you doing, or planning to do, for your community?

APPENDIX B

TEACHER PRODUCTION IN NEW HAMPSHIRE

By

W. Timothy Weaver, Ph.D.*

Contents

	Page
I. Background: Quantitative Factors	95
Future Teacher Needs in N. H. Schools.	97
Increased Enrollments.	97
Dropout Rate.	98
Change in Student-Teacher Ratio.	98
Preprimary.	98
Expanded School Year.	99
Compensatory Education.	99
II. The Declining Need for Teacher Production and the New Hampshire Response	100
Over Supply of Teachers.	100
Under Supply of Teachers.	101
Teacher Production.	101
The New Hampshire Response.	105
The U.N.H. Reorganization Plan.	105
Keene State College.	106
Plymouth State College.	107
New England College.	107
Notre Dame College.	108
Some Observations.	108
Declining Teacher Need.	109

*The opinions expressed in this report are those of Dr. Weaver. I am in general agreement with them but have reservations about some of the recommendations. The report was sent for comment to the five colleges visited and to the State Department of Education. Negative reaction was received only from Plymouth State College. Everett B. Sackett.

I

Background: Quantitative Factors

In New Hampshire, as in the other states, the most important factor determining the demand for teachers is the supply and composition of the 5-17 year old population - more particularly those who are in school attendance. For the nation as a whole, the 5-17 year olds have grown in number from 12 million in 1870 to 52.7 million in 1969*, at which time the number began to decline. Not only was the size of the school-age population growing in number, that growth was accompanied by an increasing demand among the age cohort for schooling. The net result has been an expected (and fulfilled) annual increase in the number of children enrolled in school. Average daily attendance rose even during the depression when the 5-17 year olds declined by 766,063 such was the effect of increasing demand. Schoolmen have witnessed and grown accustomed to constant expansion since the turn of the century, and since 1950 somewhat of an explosion.

The data for New Hampshire parallel generally the national trend. Although census figures are not readily available on the 5-17 year olds in New Hampshire, the State Education Department# shows a school enrollment profile which declined from a peak of 77,782 in 1933-34 to a low of 65,587 in 1944-45, and then begins to rise constantly, reaching a level of 165,658** in 1971-72.

During the entire period of time from the late 1800's to the present time, the most obvious feature of nearly every school system in this state and across the country has been quantitative growth. Constant growth in the school-age population has stimulated a constantly rising demand for school teachers in New Hampshire and the country as a whole. There are two primary reasons for this: first, we have come to believe it is not feasible for mass education to

* Digest of Educational Statistics. National Center for Educational Statistics. USHEW No. OE72-45, 1971 Edition. See Table 32, pages 28-29.

\# State Education Department, Division of Administration Memo: "Actual and Projected Enrollments in New Hampshire Public Schools." June 11, 1972.

**In addition to this public school enrollment, there were over 14,000 more in parochial schools.

occur outside of compulsory schools, and thus when the population to be schooled increases the schools have automatically expanded and hired more teachers. But it is the second reason which accounts for hiring of more teachers: the student teacher ratio in any school system shows very little elasticity, seeming for the most part to be relatively fixed. Thus, for every incremental increase in student enrollment a relatively fixed number of teachers and other instructional staff are hired.

Reflecting on the first point, all of the growth in educational demand which effects teacher hiring does not occur in the public and regular non-public schools in New Hampshire. The most rapidly growing area of teacher demand nationally, and in New Hampshire presumably, is in preprimary education. The term "presumably" is used because the State Education Department has no data on the quantity or quality of preprimary education in New Hampshire other than kindergartens. The important thing to be noted is that the demand for teachers in grades 1 through 12 is likely to stabilize or decline over the next 20 years - reflecting simply a contraction or stabilization in enrollment - but the demand for early childhood specialists will likely increase.

To turn for a moment to the point about student-teacher ratio, the aggregate change in instructional staff per 1000 enrolled pupils has been limited nationally to an annual average rate of approximately 0.7% since 1930.* In 1930 the ratio was 34.3 per 1000 pupils or approximately 29 students per instructional staff member. In 1968 the ratio had fallen to approximately 21 students per instructional staff. The ratio of teachers per student population is expected to decline from 28.4 in 1960 to 22.7 in 1980 for the elementary schools.# The secondary pupils per teacher will decline from 21.7 in 1960 to 18.9 in 1980.** For New Hampshire, the students per teacher in any given year will generally reflect the national norm. The historical data on teacher-student ratios for the country as a whole could not be obtained prior to 1960. However, in New Hampshire, the student-teacher ratio in 1930 was 25.05 students per classroom teacher.## In 1938, the ratio had shifted slightly to 25.8 students per teacher.***For the most recent complete year on which data could be examined, New Hampshire elementary schools showed a ratio of 22.6 pupils per

* Statistics of State School Systems, 1967-68. National Center for Educational Statistics, USHEW No. OE 20020-68, See Table B, Page 4.

Projection of Educational Statistics to 1980-81, 1971 Edition. National Center for Educational Statistics, USHEW No. OE 72-99. See Table 27, page 61.

**Ibid.

##Computed from statistics in the Biennial Report of the State Education Department, Concord, N. H. 1929-30. See Table III: Pupils in Public Schools, and Table IV: Teachers in Public Day School.

***Biennial Report, 1937-38.

teacher. While the secondary schools showed 22.7 pupils per teacher.* The national norms for 1968 were 25.4 and 20.5 respectively.#

Future Needs in the New Hampshire Schools

What are the variables, within the present schooling system, that will determine the demand for teachers in the state? The possibilities that come immediately to mind fall into six categories: (1) increased enrollments, (2) further reduction of the dropout rate, (3) change in student-teacher ratio, (4) expansion of preprimary education, (5) expanded school year, (6) compensatory education.

1. Increased enrollments. For the nation as a whole, school enrollment during the next decade is expected to decline somewhat. But in New Hampshire, the case may be different due to in-migration in the southern counties. However, the exact effect of such in-migration has not been studied, and one is left with two recent school projections which tell different stories. In a study commissioned by Sackett and Associations, Professor Durgin** projects enrollments in the public and parochial schools as being stable from 1971-1976, ranging from 179,807 in 1971 to 179,414 in 1976. However, the State Education Department## forecast for the same period, using only public school enrollments, shows an increase of 5.4%, moving from 170,934 in 1972 to 180,557 in 1976. The State Education Department projection carries the growth forecast to 1981-82 when the public schools will enroll 185,240. The growth in enrollment for the 1972-1981 period as projected by State Education Department shows an increase of 10.6%. Both the Durgin projection and the State Education Department projection forecast a slowing in the school enrollments, the latter figures being more optimistic, i.e., showing only a decline in the rate of increase. Overall, the State Education Department figures show an annual average rate of growth from 1972-1981 at 1.06% per year. For the period 1962-1971 the average annual growth rate is 2.9%.

One must conclude that even though New Hampshire may differ somewhat from the national trend, school expansion in this decade will be slower and less significant for teacher production than during any period since WW II.

* The elementary data includes grades 1-6, but not kindergarten, plus special education and ungraded enrollments. Secondary data include grades 7-12 plus the academies and 64 post graduate students. Biennial Report, December 1970.

\# Op cit.

** Durgin, undated memo prepared for Sackett and Associates, see Table I Enrollment Data and Projected 1952-1987.

\#\# Op cit.

2. Dropout Rate. The state attrition rate between grade 1 and grade 12 is not available for analysis. One can assume, however, that school completion in New Hampshire is close to national trend.

The national dropout problem is beginning to lose prominence as an educational priority. Historicaliy, the dropout rate has dwindled to less than 20%. There is evidence that a slowing in the rate of eliminating dropouts is at hand. The majority of those who do not now complete school are marginal learners, and the expense of providing them with 12 years of schooling is increasingly a problem. Byrnes & Tussing* project that dropouts will decline over the next 20 years at a rate slower than any other period in this century (except WW II). In New Hampshire, as in the nation as a whole, any effort to further aid the potential dropout must compete with other claims for educational dollars. The competition for those dollars is likely to intensify as the last of the baby-boom population attempts to squeeze into postsecondary education. The transfer of that population to postsecondary with its attendant needs and appetites for resources, will amost certainly slow the effort on dropouts.

One is left to conclude that the school success rate (converse of the dropout rate) has reached (or will soon) its upper limit. The only other nation in the world to guarantee 8/10ths of its citizens the equivalency of a 12-year education is Japan. Insuring that the remaining 2/10ths are educated exceeds, at present, both the knowledge of schoolmen and the necessary public support.

3. Change in Student-Teacher Ratio. The student-teacher ratio might be reduced at a faster rate than the above mentioned historical rate. That seems unlikely given the very slight change in New Hampshire since 1930, a change which seems to have ignored such factors as the depression, World War II, the Korean War, sputnik and the social upheaval of the sixties, to say nothing of the growing percentage of marginal learners in the schools throughout the 1950's and 1960's. Federal funds may change the picture, but revenue sharing is very unclear at the moment as regards its effect on class loads.

4. Preprimary. The projection data on preprimary education in New Hampshire is very meager outside of the kindergarten data reported by those districts which offer such programs. The private day schools for children aged 3-5 in New Hampshire are not monitored, licensed or controlled by the State Education Department. How rapidly they are growing, the quantity and quality of their programs is unknown.

* James C. Byrnes and A. Dale Tussing. The Financial Crisis in Higher Education, Syracuse, New York, EPRC, RR-6, September 1971, page 24.

However, at the national level, more statistics are available to paint a general picture or national trend. In October 1971, 84.4% of the 5 year olds were enrolled in educational programs - up from 69.3% in 1970.* A total of 29.8% of the 4 year olds were enrolled, an increase over 1970 which showed a 27.8% enrollment, suggesting that the 4 year olds are the next target for school expansion. The overall demand for early childhood educators has a very wide base for expansion. For the country as a whole, only 12.4% of the 3 year olds were enrolled in preprimary programs. New Hampshire, one might presume because of its general absence of public preprimary programs, may trail the national trends. Nonetheless, the preprimary area is likely to be the best hope for many prospective teachers, but remains the least well studied area in New Hampshire education.

5. Expanded School Year. New Hampshire school term in length was in 1967-68 very close to the national average - New Hampshire was 179.9 days, and the national average was 178.8 - the longest being 183.3 days and the shortest 175.4 days. Judging from historical national data, the school year has increased little since 1930 - remarkably little. The average length of the school year increased from 132 days in 1869-70 to 173 in 1929-30. Since 1930 the average school year has practically remained unchanged, reaching a peak of 179 days in 1961-62. The likelihood of radical change seems remote. Thus, year around schools with some potential for additional teaching slots would not seem to be an important factor in teacher employment.

6. Compensatory Education. The great majority of funds in this area come from federal sources. Although there is considerable elasticity in the percentage of funds that can be reasonably used in compensatory education, the current national priorities seem clearly to be shifting away from elementary and secondary education in general and the disadvantaged child in particular. In the New Hampshire 1969-70 fiscal budget as reported in the 84th Biennial Report the federal contribution under Elementary and Secondary Education Act Title I and Title II for New Hampshire was $2.9 million. That figure is likely to be changed radically under the new formula for educational revenue. For reasons of cost (per pupil costs are very high in compensatory education), low probability of success (even if money were available), and general apathy toward, or worse yet, resistance to, such efforts, the prospect seems remote for any massive expansion of compensatory education in New Hampshire. Rather the prospect seems likely that compensatory funds will dry up, eliminating several hundred teaching jobs.

* Preprimary Enrollment, October 1971. National Center for Educational Statistics, USHEW No. OE 27-197, 1972. See Table 1, page 10.

II

The Declining Need for Teacher Production and The New Hampshire Response

Two recent national research reports document and clearly substantiate the growing surplus teacher trend.

DeWitt and Tussing* using National Education Association data and other sources, forecast an average yearly market for new teaching positions at roughly 145,000 through the 1970's. Based on expected teacher production during the 1970's they project that surpluses will rise from roughly 73,000 in 1970 to 175,000 in 1980. However, the DeWitt-Tussing argument is that the surpluses won't materialize; instead they represent "an estimate of the adjustment problem." They predict the supply will decline as potential teacher candidates choose other fields and colleges of education reduce teacher production.

Over Supply of Teachers

In late July 1973, the National Education Association reports# that 26 states claim a "much larger excess than one year ago" in response to queries about teacher applicants for jobs. The trend since 1966 is clear. Whereas in 1966, 31 out of 50 state departments of education reported either "substantial shortage of applicants" or "some shortage of applicants," in 1972 no state reported substantial shortages, nor had any state so reported since 1969 when only two did. Only one state reported in 1972 that "some shortage of applicants" existed. Late July openings for teachers have declined in the 80 largest school districts from 7,843 in 1967 to 820 in 1972. A report from 61 large school systems shows 9 qualified applicants for each open position in 1972 compared with 7 applicants the year before.

* Laurence B. DeWitt and A. Dale Tussing. The Supply and Demand for Graduates of Higher Education: 1970 to 1980. EPRC, Syracuse, 1971.

\# Teacher Supply and Demand in Public Schools, 1972. Research Report 1972-R8, National Education Association - Research Division 1972. The data throughout this section on teacher production were developed from the NEA Report.

Regarding areas of oversupply, states reported to the National Education Association those teaching fields in which they had surpluses of applicants for jobs:

Areas	Number of States
Social Studies	39
Language Arts	34
Health & Phys. Ed. (men)	33
Elementary	26
Foreign Language	18
Health & Phys. Ed. (women)	16
Home Economics	15
Business Educ.	14
Art	13

Under Supply of Teachers

In 1972 there were still areas in which states reported too few teacher applicants for job openings. Those areas are listed below:

Areas	Number of States
Special Education	30
Trade, Industrial, Voc-Tech.	27
Industrial Arts	24
Remedial Reading, Speech Correction	23
Educationally Disadvantaged	23
Librarians	15
Mathematics	14

Special education, remedial reading, industrial arts and trade are areas most frequently mentioned as likely to be filled by persons with sub-standard qualifications. Although math teachers have traditionally been in low supply, the present number of graduates now is almost as large as the number of new teachers employed.

Teacher Production

A total of 309,803 new teachers were prepared for entry into the job market for the fall 1972 school term. In elementary education the 127,088 new teachers represent a slight decline, .2% as compared to 1971. In secondary education, the 182,715 new teachers represent a net increase over 1972 by 5.6%. Most of these new teachers began their preparation in 1968, before the teacher surplus problem had gained much attention. Thus, one can expect a lag in the adjustment process DeWitt and Tussing forecast of perhaps 4 to 6 years. However, a breakdown of the new teachers in each field shows substantial increases in some of the areas of greatest surplus.

Areas of Increase Over 1971 Production	Size of Increase
1. Social Studies (Economics Sociology and Psychology)	+ 23.6
2. Special Education	+ 19.7
3. Health & Physical Education	+ 15.5
4. Distributive Education	+ 14.5
5. Speech & Drama	+ 12.3
6. Art (Secondary)	+ 11.7
7. Physics	+ 11.4
8. Industrial Arts	+ 10.9

The National Education Association estimates that a total of 111,817 elementary teacher graduates were fully qualified to enter teaching as beginning teachers in the fall, 1972. Based on the percentage of new teachers hired from such candidates the previous year, the schools would have hired 83,659, leaving a surplus of 28,158. Of the fully qualified 131,384 new secondary teachers, a total of 90,900 would have been hired, using the same assumptions. The low side of the estimate would show only 51,880 of the 111,817 new elementary teachers hired, and only 80,300 of the 131,384 secondary teachers hired. Total surpiuses, based on the low demand estimate, would reach 111,101 teachers in the 1972-73 school term. Based on 1971 hiring practices, the surpluses would reach 68,642 unemployable new teachers.

The hiring of teachers is complicated by a large pool of qualified teachers with previous experience who are currently not teaching. In fall 1972 approximately 83,400 qualified teachers with interrupted service were interested in re-entering teaching. The number of positions expected to be filled by re-entering teachers is estimated by the National Education Association to range between 54,000 and 64,900 leaving an additional teacher surplus of 18,500 to 29,400 in 1972.

The New Hampshire production of new teachers in 1972 (combining masters and B.A.'s) was up 14.8%*. That increase ranked New Hampshire 7th in the nation in percentage of increase in teacher production over 1971. Below is a breakdown of New Hampshire's teacher production in undersupplied and oversupplied areas.

* These particular data regarding New Hampshire were also developed from the NEA Report.

Teaching Fields In Undersupply

Areas	Number of New Teachers 1971	Number of New Teachers 1972
Special Education	0	3 +
Trade, Vocational-Technical	0	0
Industrial Arts	24	18 -
Remedial Reading & Speech	0	0
Disadvantaged	0	0
Librarians	8	1 -
Mathematics	37	38 +

Teaching Fields In Oversupply

Areas	Number of New Teachers 1971	Number of New Teachers 1972
Social Studies	132	181 +
Language Arts	94	117 +
Physical Education	97	105 +
Elementary	421	483 +
Foreign Language	37	44 +
Home Economics	16	20 +
Business Education	23	22 -
Art	18	25 +

New Hampshire standard licenses were issued to each graduate of an approved teacher program for the year 1971-72. The breakdown in teacher production by college in the state follows:

Name of College	Number of Certificates
Keene State College	342
Plymouth State College	325
University of New Hampshire	290
Rivier College	110
Notre Dame College	101
St. Anselm's College	67
New England College	59
Mt. St. Mary College	41
Dartmouth College	17
Franklin Pierce College	17
New Hampshire College	11
Nathaniel Hawthorne College	8
Belknap College	5
Canaan College	1
Total	1,394

Supply and demand for teachers in New Hampshire is complicated by a substantial (although undetermined) number of out-of-state teacher applicants.* Of the 6,485 credentials issued under the following categories: professional certificate, standard license, standard certificate, provisional conversion license and non-degree certificate, only 1658 credentials were issued to 1972 graduates of New Hampshire colleges. These data are to be analyzed carefully because New Hampshire issues eleven different kinds of credentials. The standard license distinguishes beginning teachers with bachelor's degrees (which figures differ in two separate sections of the same license). The professional certificate, however, is issued upon completion of any of the following:

- "Three years of successful teaching, supervisory or administrative experience.
- Graduate degree in education or closely related field.
- Recommendation of local superintendent filed with Office of Teacher Education and Professional Standards."

Therefore, the 264 professional certificates issued graduates of state colleges are mixed in with an additional 432 professional certificates issued for other reasons. The 1394 standard licenses issued to baccalaureate graduates of New Hampshire colleges as beginning teachers are mixed in with 1794 applicants from out-of-state. The standard certificate is based on "Three years of successful teaching, supervisory or administrative experience," and it is not clear whether this credential is restricted to New Hampshire applicants, or issued to out-of-state applicants as well.

It is therefore difficult to judge from these various credentials, some issued upon completion of college programs and others upon experience, just how many teachers (beginning and experienced) from out-of-state seek teaching positions in New Hampshire. It is also not clear from conversations with teacher preparation directors at five colleges just how many New Hampshire graduates seek employment outside of New Hampshire. In short, although one assumes that supply and demand for teachers is a problem which crosses state boundaries, the exact extent of boundary crossing is difficult to assess.

It is clear, however, that the state has many fewer vacancies than job applicants. Approximately 371 new jobs were advertised through the Office of Employment Security in New Hampshire during the 1972-73 school term. At least 2821 new teachers were eligible for the openings - based on those applying for standard licenses including in-state and out-of-state graduates plus out-of-state graduates applying for professional certificates. The remaining credential applicants included an unknown number of teachers already employed in the state. All told, a total of 6581 credentials were sought in New Hampshire in 1972.

*The following information on New Hampshire credentials is taken from a news release supplied by Harvey Harkness, Director, Teacher Education and Professional Standards, State Education Department, Concord, N. H., May, 1973.

The state, however, is beyond its peak teacher shortage year, 1968-69, when 888 vacancies were advertised. In 1972 shortages were reported only in industrial arts, administration, vocational education, and to a lesser extent in guidance counseling. The remaining area of concern is special education because many districts had not yet implemented their programs. Thus, continuing need is expected in special education. Based on information supplied by the Office of Employment Security, the following teachers vacancies have been reported by all superintendents of schools for the years 1964 - 1972.

Years	Job Vacancies Reported to Office of Employment Security
1972-73	371
1971-72	426
1970-71	664
1969-70	709
1968-69	888
1967-68	807
1966-67	622
1965-66	511
1964-65	311

Additional figures are available from the administrative division, State Education Department in Concord for the years 1969-1972 concerning job openings as of July 15th of each year.

Year As of July 15	Number of Teacher Openings As of July 15
1972	174
1971	166
1970	282
1969	408

The New Hampshire Response

Two of the five colleges* selected for study have specific plans for reorganization or major cutbacks which coincide with the emerging realities of teacher surplus. The other three have no drawn up plans for adjustment in the future.

The U.N.H. Reorganization Plan. The Department of Education will be reorganized by the fall of 1975 to offer a fifth-year degree in teacher education, either a Master of Arts in Teaching or a Master of Education in either elementary or secondary education. The fifth year will be primarily devoted to an internship experience plus course credits in the major discipline for

*The colleges visited were Keene State, Plymouth State, U.N.H., New England College, Notre Dame College. Interviews were conducted in May 1973 by this writer.

M.A.T. candidates or education courses for M.Ed. candidates. The present master's degree programs in administration, counseling, reading, and early childhood education will be continued and new programs are being planned in developmental disabilities and adult education. A post-master's certificate program in administration is also contemplated, in addition to the counseling program at this level already offered. Effective in the fall of 1975 the University will no longer offer a baccalaureate program in education.

The Department of Education at U.N.H. anticipates a significant reduction in the number of students in teacher education programs - a drop from 290 graduates in 1972 to approximately 150 when the reorganization plan is fully implemented. It is also anticipated that academic standards will continue to rise for admission to the program (on the rise now).* It is also anticipated that more faculty time will be devoted to inservice and continuing education activities.

As an ingredient in the reorganization program, the Department will change its student teaching program so that supervisors are located in selected training sites rather than traveling from the University to scattered schools. As part of the phase-in process summer programs are to be developed which will prepare resident supervisory teachers. Three summer sessions will be required for a master's degree qualifying the supervising teacher for assignment. The curriculum for the reorganized education program will be developed in modules so that students may work independently and so that programs can be transported to the field for inservice education for full-time teaching staff.

The Department at present anticipates expanding its programs in the following areas, as market demands become clearer: graduate education in learning disabilities, reading, counseling, early childhood, and administration. At present superintendents and principals must go to Boston University for graduate work. U.N.H. will seek a certificate program beyond the master's degree in administration as part of the reorganization effort.

Keene State College. The response at Keene State College is to reduce the number of students admitted to teacher preparation. The plans are now to accept approximately 200 applicants out of the expected 600 applicants for teacher preparation, which would be a reduction of about 50% under the number accepted fall, 1972.

The rationale given for the proposed cutback is faculty overload. Student contact hours have increased from 15,000 to 17,800 without an increase in faculty. Grade point average will be used as part of the tightening process - rising from 2.0 to 2.25 for admission to teacher education. It was not clear whether cuts are to be across the board or selective.

*The Department of Education now ranks 7th in Graduate Record Examination scores out of 25 departments at U.N.H. which admit graduate students, and scores have been steadily rising.

Plymouth State College. The fall, 1973 enrollment, as planned now, at Plymouth State College will increase at about its historical rate of 100 additional students per year, as will admissions to teacher preparation. Last year's freshman class was 700; the freshman class in fall 1973 is expected to be roughly 850. Approximately 68% will be admitted to teacher education. Plans are now to strengthen those programs which are approved by the state: elementary education, 533 majors; secondary education, 385; business education, 87; art education, 116; music education, 56; and physical education, 189 men and 186 women.

Other plans include the following:

1. Studying possible reduction or elimination of physical and biological science programs and music education due to expanding overhead cost.

2. Expansion into social work and family service areas based on existing program offerings in psychology, guidance, human development, etc.

3. Expansion of on-campus evening and summer courses for adults in recreational areas primarily.

4. Introduce modular curriculum based primarily on Boulder, Colorado model - hope to have some courses ready by fall 1973.

Plymouth State College has no plans at present to raise entrance requirements for teacher candidates.*

New England College. New England College has been encouraged by the State Education Department to cutback the teacher education program. The plan now is to begin screening out the bottom 5-10% at three junctures: a) prior to teacher aide work at sophomore level, b) after teacher aide experience, and c) prior to student teaching in junior year. At the same time, the college will issue a "general education degree" for those students who want to graduate as education majors but fail student teaching. Such graduates would not receive teaching certificates but could seek employment in private schools, youth work, etc.

*Both President Harold E. Hyde and Professor Norton R. Bagley of Plymouth State College have written expressing philosophical objections to authoritarian efforts to deny to students the opportunity of preparing to be teachers and of over-emphasis on academic competence in the screening process. They also note steps Plymouth is taking in recognition of the over-supply problem. Professor Bagley says: "While our college entrance requirements remain the same and the cumulative point average requirements remain the same, we are putting into effect a screening process which we hope will be more rigorous than our previous one. A required, supervised period of observation and participation in the sophomore year has been made a requirement. We hope to counsel some persons out of teacher preparation as a result of this experience, and we think that other will counsel themselves out."

Other plans include:

1. All education majors will be required to have taken 1 or 2 courses in special education.

2. Individually designed major programs will be expanded so that more students may study elsewhere (one is studying abroad now).

3. In-service and continuing education will be expanded.

4. Requirements in natural sciences are being changed to less rigorous standards for education majors (to conform with standards of the New England College Natural Sciences Division).

Notre Dame College. Notre Dame College has no present plans to alter its teacher preparation program.

Some Observations

It is beyond the scope and beyond the intention of this report to make evaluative judgements about the quality or content of existing teacher education programs. The primary reason for conducting interviews at the five institutions was to determine how they are responding to the national trend on teacher surpluses. The University, Keene and New England College have plans to cut back teacher production beginning, in the case of Keene and New England College, in the fall 1973 and U.N.H. by the fall 1975. The effect of these cutbacks will not be seen until 1978-1980 in New Hampshire's teacher production. The other two colleges visited, Notre Dame (whose programs are integrated with St. Anselm's and Mount St. Mary) and Plymouth, apparently have no plans at the moment for readjusting to the national trend.

There are several consequences one might expect to observe as a result of the contraction in teacher needs - some much more likely than others, some largely a matter of policy choices yet to be made. It is clear from the above brief review of five college responses to contraction that some of these consequences are now emerging as realities. Among the relatively certain consequences are (a) a loss of revenue for the colleges which depend upon and typically view teacher production as a "money maker," (b) declining market for teacher educators,* (c) a loss of opportunity for many rural and small town youth who choose teaching as an upwardly mobile career track, (d) decline in federal subsidies designed to reduce teacher shortages, (e) tightened hiring standards among school districts,# (f) heightened rate of "professionalization," i.e., raising level of prerequisite education required for teacher employment without substantially changing the function of tasks of teaching, (g) a general slowing in the rate of increase in teachers' salaries, and (h) cost-cutting

*In New Hampshire, the result may be merely reduced class load or "contact hours," or lost opportunity to "moonlight" on evening and summer courses.

#Already being reported by National Education Association: 14 states reported in 1972 filling a higher percentage of jobs than in 1971 with persons who had higher than minimum requirements for certification. 38 of the 69 largest school districts reported the same phenomenon.

in teacher training by such options as shifting the financial burden and responsibility for student teaching to the school district level.

Declining Teacher Need as An Opportunity

Contraction of the demand for teachers also provides an opportunity for (indeed imposes the necessity of) re-examination of standards and curriculum regarding organization. The historical process of sorting teachers has resulted in a form of "negative selection." The least capable students end up becoming teachers while the brightest either avoid departments of education or drop out somewhere along the line. This trend is well documented by North, Thorndike, Trow and others.* From interviews at U.N.H. and Keene, the opportunity to raise standards is being seized. The other three schools have no particular plans to tighten standards on the basis of academic performance or testing.

Another option, or opportunity, is to shift emphasis from preservice training to inservice training of those already employed. That option seems to be an obvious one and is in New Hampshire tied to new state requirements for credential renewal. Four of the five colleges visited had some plans for working with school districts in their staff development programs under the new state policy. The University had drawn up a set of guidelines and procedural operations tied in with its overall reorganization plan. The other four colleges had no written plans of action (i.e., no available reports or documents describing such plans).#

Perhaps the most obvious option is to expand those areas of teacher training where undersupplies remain, e.g., special education, trade and vocational technical, remedial reading and speech correction, librarians and media specialists, mathematics. Unfortunately, the New Hampshire colleges as of spring 1972 were heavily producing in all areas except those above (see previous section on teacher production). Plans for expansion into shortage areas are not clearly apparent from the interviews except perhaps at the University with its reorganization plan.

Another opportunity or option is to shift in focus from the public and non-public schools as the primary market for teacher production to a much broader market concept including adult training and education-related fields, such as family services, social work, vocational rehabilitation, or education and training in the private sector and in the military. This last option will require a

* See for instance the review of such studies by Martin Trow in "The New Media in the Evolution of American Education," in P. H. Rossi and B. J. Biddle (eds) The New Media and Education, New York: Anchor Books, 1967.

President Hyde of Plymouth writes: "It seems to be inferred that because we have no written plans of action, we are not working with school districts on their staff development programs. Nothing could be further from the truth, and we have been awarded both Spaulding-Potter and National Science Foundation grants specifically to work with school districts on the basis of staff development programs."

substantial change in attitude as well as a major change in curriculum. What is needed is a broadening of the training concept that will prepare graduates to seek employment in more than one kind of institution. The University clearly sees the necessity of seizing this opportunity and last year placed approximately one-half of its guidance and counseling graduates in non-school positions. The other colleges interviewed generally tended to view employment outside of the schooling system as the last resort for graduates who could not find teaching positions, not as a market to be studied and developed aggressively.

An even more drastic option is, of course, the complete changeover in the state colleges from predominantly teachers colleges to other professional fields. At this moment, the two state colleges are heavily dependent upon teacher preparation - at Keene 1609 out of 2200 students enrolled are in teacher preparation; at Plymouth 1552 out of 2425 students are in teacher preparation. At the moment, the fields which require a general liberal arts foundation are social work, family services, and counseling, rehabilitation, nursing and related fields such as psychiatric case workers, nurse practitioners, etc. More emphasis seems to be emerging in the health areas on liberal arts foundation. This option will become more attractive with national health insurance which carries with it a provision of subsidies for training paramedics (e.g. Kennedy bill).

A perfectly reasonable policy response is for the state to begin shifting support for postsecondary education away from its heavy commitment to the teaching profession, forecast by the Bureau of Labor Statistics to have by 1980 a supply "significantly above requirement," to support for training in those occupations forecast to be in chronic short supply, namely physicians, dietitions, physicists, counselors, dentists and paramedicals.

In this state such a shift could be accomplished by some or all of the following options:

1. Expand occupation training in fields with critical shortages at the vocational-technical colleges, while restricting the growth of the state colleges at Keene and Plymouth until the latter two readjust to changing employment trends.

2. Transfer priorities in state educational expenditures to reflect more grants and subsidies for students who want to pursue careers in chronic short supply - whether the state institutions now offer such programs or not, e.g., primary care physicians.

3. Eliminate duplication in course offerings at the three state supported teacher training centers - and transfer all graduate programs to the University where adequate staff and resources can be developed and sustained reasonably well.

4. Impose quotas or restrictions on private college production of teachers through the power of state certification - encouraging the private system to expand those areas where chronic shortages of workers exist and reduce production in areas of serious excesses.

APPENDIX C

Population Projections and New Hampshire Private College Enrollment Through 1985*

by

F. V. Pattee

Introduction. The author's interest in the "economics" of higher education has stimulated several years of study and research of the factors influencing the demand for higher education. The first paper, entitled "The Demand for Higher Education at the University of New Hampshire", by Wm. R. Hosek and F. V. Pattee was published by the Center for Industrial and Institutional Development at UNH in December 1972. The conclusions of that study indicated that at UNH four factors were of major importance in explaining changes in applications. These were U.N.H. tuition, tuition at "competing" universities, per capita N. H. personal income, and N. H. 17-24 year old population. Research in expanding the model for use by other institutions of Higher Education is now in progress. As 85% of the enrollment in the non-church-related private colleges of New Hampshire comes from out of state, changes in the positions of these other state populations, incomes, and institutions greatly affect New Hampshire enrollment. Unfortunately it has not yet been possible to gather sufficient data to derive a satisfactory model.

The purpose of this paper is two-fold; first, to estimate and project the 17-20 year old populations for each of the 9 northeastern states# whose students come to New Hampshire colleges. This is essential for the development of a refined model. Second, to provide a tentative basis for planning for higher education in the state.

Using the 17-20 year old population estimates, and assuming all else constant, we will measure the influence that changes in population could be expected to have on enrollments.

Both enrollment data and the resulting projections apply only to the nine non-church-related private colleges in New Hampshire,**

*Detailed tables by each of the nine northeast states are contained in Population Projection Tables by F. V. Pattee, available from the N. H. Postsecondary Education Commission.

#Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont.

**Belknap, Canaan, Colby, Franconia, Nathaniel Hawthorne, New England, New Hampshire, Franklin Pierce, and Dartmouth.

where the proportions of out-of-state students are both significantly high and constant. It should be recognized that the population forecasts and the resulting enrollment projections are based upon very limited assumptions.

Summary of Population Projection Estimates. The 1960 Census data for each state was multiplied by 10 year survival rates to calculate the number of each age still alive 10 years later. This was subtracted from the 1970 census data to derive net migration for each age cohort.

The population projections were calculated by multiplying the 1970 census data by the fifth root of the appropriate five year survival rate for each age and then adding in the yearly migration calculated above.

As the college age population through 1985 is already alive and is included in the 1970 census data, we were not concerned with fertility rates. Survival rates as published by the Bureau of the Census were used.*

The projections are therefore based upon assumptions concerning the only remaining factor entering into individual state population determination, i.e., migration. There is very little empirical evidence or knowledge of the causes of inter-state migration. However, yearly net migration of 17 to 19 year olds amounts to only 1 or 2 percent of the total number in this age bracket.

The net migration figures used in this projection were based upon the following assumptions.

The differences between the 1960 populations still alive ten years later were subtracted from the 1970 data, leaving net migration for the 10 year period for each age cohort. One-tenth of this - i.e.

*Yearly survival rates were derived by taking the 5th root of the 5 year survival rates for 1971 shown in the first column of Table A5, entitled "Five-year survival rates for the total population by sex: 1971 and projections, 1975-1980 to 2000-2005, in current population reports Population Estimates and Projections Series P.25 #492, December, 1972, U.S. Department of Commerce, Bureau of Census.

Yearly survival rate for 1976-1980 - 5th root of Col. 2 in Table A5,
Survival 1981-85. 5th root of Col. 3 of A5.
Survival 1-5 = Col. 1 of A5.
Survival 6-10 = Col. 1 of A.5 lagged 5 years.
Survival 1-10 = (Survival 1-5) x (Survival 6-10)

one year's net migration - was then added to the previous year's survivals to calculate the following year's population. In other words, we are assuming that the average net migration for each individual age cohort from 1960 to 1970 will continue from 1970 to 1985. Migration averages 1% of the total population for each individual age cohort, and the variation in the 10-year migration averages was approximately ± 100% - therefore the possible error (due to migration estimates) in the resulting projections would be within + 1%. Family migration patterns do vary depending upon the ages of family members. They also vary from state to state.

The major weakness in the application of this assumption is in the averaging of the change which took place in the number in each cohort between 1960 and 1970. For example, one-year-olds became two-year-olds in 1961, three-year-olds in 1962, and 10-year-olds in 1970. The difference between this last figure corrected for survivals and the 1970 census of 10 year olds was net migration. Dividing it by 10 does give us the average number of migrants per year (1960-1970), but this average is of one-year-olds in 1961, two-year-olds in 1962,....and ten year olds in 1970. Over a ten year span of time very little error is introduced, but from year to year the error may be as large as 1 or 2 percent, as mentioned above. Table 1C shows the net yearly migration per age cohort.

State of Origin of Students. Column 1 of Table 2C indicates the number of F.T.E. undergraduate students enrolled in the nine private independent colleges from the nine states supplying more than 1% of total student enrollment.* Together these nine states account for 80% of the total, with New Hampshire supplying only 14%. The figures cited are for 1970. The 1968 figures did not vary in any case by more than 1%, and the pattern appears to be very stable. The research material for "The Impact of Higher Education on the Economy of New Hampshire" shows the in-state: out-of-state student mix to be stable.#

Column 2 of Table 2C indicates the percentage of total enrollment from each state, with 20% coming from all other states and countries. Column 3 provides the proportion from each of the nine states excluding "all others". These are used as relative "weights" for the regressions in the following section.

*Source, "Residence of College Students", questionnaire to each college from Sackett & Associates, March 1971.

#F. V. Pattee, "The Impact of Higher Education on the Economy of New Hampshire," Center for Industrial and Institutional Development, University of New Hampshire, Durham, New Hampshire, 1973.

Regressions and Projections. The numbers of 17-20 year olds for each of the nine states were multiplied by the proportion of students coming from each state as shown in column 3 of Table 2C. The effect of this procedure is to "weigh" each state's population according to its contribution to total New Hampshire enrollment. Enrollment was then regressed on total weighed population assuming a linear relationship of the form $Y = a + b X$. The following results were derived by ordinary least squares regression.

$$(\text{ENROLLMENT}) = a + b\ (\text{POPULATION})$$

$$a = 4358 \quad (T = 2.294)$$

$$b = 0.0234 \quad (T = 6.325)$$

$$R^2 = .8126 \quad \text{(Adjusted for degrees of freedom)}$$

For the years 1964-72 the estimates resulting from this equation were all within 8½ per cent of the actual enrollment figures.

To derive the estimated total enrollment through 1985, the weighed 17-20 year old totals were multiplied by 0.0234 and then the constant (4358) was subtracted to leave us with the estimated enrollments. Individual state projections were derived by multiplying the total estimated enrollment by Column 2 of Table 2C. The results are presented in Table 10 of the main text. (See above, p.39).

It should be noted that the projections on Table 10 are based only upon 17-20 year old population changes in the nine northeastern states. From 1964 through 1972 this variable alone explained 81% of the variation in enrollment. Specifically, the following assumptions are made:

1) Interstate migration patterns will not change significantly.
2) There will be no significant change in the proportion of 17-20 year olds going to private independent colleges.
3) There will be no change in the relative capacity or "competition" for students between states.
4) There will be no net change in the New Hampshire colleges' attempts to attract students.
5) The relative price (tuition) cost structure will remain constant.

TABLE 1C

Net Yearly Migration, by State, per Age Cohort

Age	Net Yearly Migration								
	Conn.	Maine	Mass.	N. H.	N. J.	N. Y.	Penna.	R. I.	Vermont
6	386	-160	136	133	1126	957	-143	6	43
7	405	-131	221	86	1187	936	-190	7	21
8	374	- 7	1140	216	311	1203	- 71	226	186
9	160	-140	1249	215	- 73	524	-941	364	159
10	170	-200	964	162	-253	246	-2075	508	27
11	- 23	-288	405	48	-749	-1230	-3282	425	- 18
12	155	-395	234	- 16	-593	-1384	-3699	288	- 59
13	324	-415	399	4	-165	-316	-3315	182	- 81
14	409	-380	371	39	429	1345	-2386	91	- 57
15	513	-370	366	64	604	1608	-2363	65	- 73
16	553	-383	250	86	910	1903	-2710	32	- 41
17	705	-340	340	112	1298	2676	-2457	- 3	- 58
18	939	-240	129	121	1878	3724	-1645	-139	- 60
19	971	-188	128	74	2244	4387	- 23	-284	- 62
20	996	-110	396	137	2484	4550	353	-235	39
21	794	-281	17	61	1905	2414	-292	-202	2
22	667	-152	93	135	1730	1870	87	- 98	56
23	609	- 67	95	180	1332	1407	- 42	- 70	53
24	575	- 93	75	156	1375	1651	191	- 21	50
25	460	-102	94	117	1288	1004	-106	3	50
26	441	- 45	63	125	1155	604	-187	49	31
27	436	-113	76	114	1147	170	-254	- 3	15
28	337	- 60	73	116	1136	400	- 15	50	42
29	364	- 76	15	104	1029	157	-144	5	31
30	532	5	303	130	1398	1101	435	48	78

TABLE 2C

STATE OF ORIGIN OF STUDENTS IN NEW HAMPSHIRE
NON-CHURCH-RELATED PRIVATE COLLEGES - 1970

	Number of Students Enrolled from each State	Percent of Enrollment from each State (1970)	Weight to be Applied to Each State
Conn.	668	7.77%	.0978
Maine	187	2.17	.0274
Mass.	1,395	16.22	.2043
N. H.	1,170	13.60	.1914
N. J.	968	11.26	.1418
N. Y.	1,836	21.35	.2689
Penna.	361	4.20	.0529
R.I.	111	1.29	.0163
Vt.	132	1.53	.0193
Total	6,828	79.39	1.0000
Other	1,772	20.61	
Total	8,600	100.00	

TABLE 3C

STATE OF ORIGIN OF NEW HAMPSHIRE COLLEGE & UNIVERSITY STUDENTS

1968 COMPARED WITH 1970

	1968	1970
N. H.	48%	48%
Conn.	5	5
Maine	3	3
Mass.	16	16
R. I.	1	1
Vermont	2	2
N. J.	6	5
N. Y.	10	10
Penna.	2	2
Other	7	8
	100%	100%
Number of Students	21,469	26,044 Gain 4,575 21%

When the state university and its branches, and the four church-related colleges are included in the totals, the picture changes somewhat. Both of these groups include a much larger proportion of New Hampshire students. As student enrollment in all of these 4-year colleges increased by 21% from 1968 to 1970, the proportion coming from any one state changed by no more than 1%.

APPENDIX D

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APPENDIX E

Memberships of Succeeded Agencies

COORDINATING BOARD OF ADVANCED EDUCATION AND ACCREDITATION

Jere A. Chase, Chairman
William P. Bittenbender
Thomas N. Bonner
Carroll W. Brewster
Sr. Clarice Dion, P.M.
Harold E. Hyde
Newell J. Paire
Leo F. Redfern
Rev. Placidus H. Riley, O.S.B.
R. Peter Shapiro
Arthur E. Jensen, Executive Secretary

HIGHER EDUCATION FACILITIES COMMISSION

Edward D. Wynot, Chairman
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Thomas N. Bonner
John C. Driscoll
Alan M. Hill
Rev. Bernard C. Holmes
Raymond L. Houde
Earl H. Little
Richard E. Murray
Charles V. Tallman
Lewis C. Vaccaro
Albert Hall, Jr., Executive Secretary

Both of the above agencies have been succeeded by the POSTSECONDARY EDUCATION COMMISSION, as of July 1, 1973.